

### **REMARKS**

The final Office action mailed on 18 December 2008 (Paper No. 20081216) has been carefully considered.

#### **Status of the Claims**

Claims 1 through 56, 64 through 84, 90 through 100, 105 through 116 and 119 through 121 are pending in this application, of which claims 43 through 45, 73 and 94 are withdrawn from consideration.

#### **Listing of the Claims**

Pursuant to 37 CFR §1.121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims in the application.

#### **Amendment of the Claims**

No claims are amended by this Paper.

### **Claim Rejection Under 35 U.S.C. § 112**

#### **I. Claims 90 and 120 are rejected under the *first* paragraph of 35 U.S.C. § 112 for lack of enablement.**

Claims 90 and 120 were rejected under the first paragraph of 35 U.S.C. §112, with an averment that Appellant's specification failed to satisfy the enablement requirement of the first paragraph of 35 U.S.C. §112 because these claims contain "subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention." The rejection is improper for the following reasons. Specifically, the Examiner states that the specification fails to provide support for the "at least one electromechanical locking member" and "plurality of electromechanical locking members" set forth in claims 90 and 120,

respectively.

Now, the Examiner argues that,

“firstly, the solenoid coils 109, argued on page 69 of the amendment filed 2/24/03, are not disclosed ‘locking members’.”

The Examiner has confused the disclosure in the specification. With reference to Figure 3, by way of example, the “solenoid coils” are identified by reference numbers such as “106d” or “106D”, or in Figure 5A, “108b”, and in Figure 5, as “108b”. The entire assembly however, is readily described as “a plurality of electromechanical locking members.” Moreover, Applicant clearly illustrate three discrete versions of these plurality of electromechanical locking members in Figure 1, and nowhere negates use of more than a single one of these plurality of electromechanical locking members.

The Examiner’s attention is invited to consider the question of enablement discussed in *Arnold C. Bilstad, the Gorge Wakalopulos*, 386 F.3 1116(CAFC 7 October 2004) where the Court noted “[T]hat a claim may be broader than the specific embodiment disclosed in a specification is in itself of no moment.” Here, as in Bilstad, Applicant discloses a plurality of single assemblies that, unlike references of record such as Gokcebay ‘777 contains “a plurality of electromechanical locking members” as well as “at least one electromechanical locking member” as set forth in claims 90 and 120, respectively.

The Examiner further argues that,

“The specification discloses that the ‘plurality’ of locking members 106a, 107a, 108a are used alternatively and not as a plurality within the same plug.” See the specification on page 12, lines 11 -13 which clearly recites the use of locking member 106a or 107a or 108a.”

Applicant notes that the discussion on page 12, lines 11-13 is one small portion of the entirety of Applicant’s specification, and that portion describes the interchangeability of these assemblies in different embodiments. Nothing in Applicant’s page 12 negates the use of a

plurality of any one of these embodiments or the use of two, or more, different ones of these embodiments.

The Examiner is referred to *Lampi Corp. v. American Power Products, Inc.*, 228 F3d 1365, 1377-78 (Fed. Cir. 2000) which affirmed a District Court's finding that disclosure of only identical half-shells were sufficient with description support for a claim in compassing both identical and non-identical half-shells. As a general rule, a disclosure of species provides sufficient written description support for a later filed claim directed to a genus.

Here, the Examiner seeks to ignore this general rule and instead, substitute a rule that disclosure of "one" invokes a "one and only one" limitation. This substitution was refuted by the U.S. Court of Appeals for the Federal Circuit, which held, in the interpretation of claims, "the use of the singular form "a" in conjunction with "comprising" and without narrowing language typically encompasses **both** singular and plural embodiments.<sup>1</sup>

Consequently, the basis for this rejection is unattainable, and may not be sustained. The Examiner is respectfully urged therefore, to withdraw this rejection in view of the overwhelming adequacy of Applicant's disclosure of a multiplicity of embodiments which may be used either singularly, in various combinations of different species or in a plurality of like or different species. Such action is respectfully urged.

#### **A. Appellant's Originally Filed Specification Provides Enablement For The Subject Matter Defined By Claims 90 And 120**

In support of the rejection, Paper No. 20080619 states that,

"Claims 90 and 120 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains [*sic*] subject matter *which was not described in the specification* in such a way as to enable one skilled in the art ... to make and/or use the invention. Secondly, the specification discloses that the *plurality* of locking members 106a,

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<sup>1</sup> *Hyperphase Technologies, LLC v. Google, Inc.*, Case Nos 07-1125, -1176 (Fed.Cir. 26 December 2007) (Michel C. J.).

107a, 108a are used alternatively and not as a plurality within the same plug. See the specification on page 12, lines 11-13 which clearly recites the use of locking member 106a or 107a or 108a.”<sup>2</sup>

Under current Office practice,

“[t]o satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention”.<sup>3</sup>

The typical issue “raised in the cases is most often phrased as whether the original application provides ‘adequate support’ for the claims at issue or whether the material added to the specification incorporates ‘new matter’ in violation of 35 U.S.C. §132.”<sup>4</sup> Here, no matter has been added to the specification; the issue before the Examining staff is thus, “whether the original application provides ‘adequate support’ for” claims 90 through 120?

The Examining staff premised this rejection of claims 90 through 120 on grounds that,

“the instant specification fails to provide support for the *at least one electromechanical locking member* and *plurality of electromechanical locking members* set forth in claims 90 and 120, respectfully.”<sup>5</sup>

No other averment is made in support of this rejection. At issue therefore, is “whether the original application provides “adequate support” for the claims at issue”?

Appellant invites the attention of the Examining staff to Figures 2 through 7, and especially to the embodiment of Figure 3 which shows the distal portion 106a surrounding the distal portion 106B of detent 106A. In the language of the original specification, “[t]he open distal end of chamber 80 is intersected by a circumferential groove 101f which may partially, or

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<sup>2</sup> Paper No. 20080619, ¶3.

<sup>3</sup> MPEP, §2163, p. 2100-172 (Rev. 3, August 2005).

<sup>4</sup> MPEP, §2163, p. 2100-172 (Rev. 3, August 2005).

<sup>5</sup> Paper No. 20080619, ¶4, page 3.

completely, encircle the exterior circumferential surface of plug 101”;<sup>6</sup> “[a]rmture 106a forms the radially outward distal end of solenoid coil 106b, and is radially outwardly biased by spring 106D so as to extend radially upwardly into the path of groove 101 $\ell$  and thereby engage detent 106A”;<sup>7</sup> and “cavity 106c will surround detent 106A.”<sup>8</sup> The attention of the Examining staff is further invited to page 14 of the originally filed specification, where Appellant teaches that,

“when an unidirectional electrical current is applied through the particular winding 106b, 107b, 108b, the corresponding shaft 106d, 107d, 108d will either axially reciprocate (*i.e.*, radially through its corresponding chamber 82) along axis A or incrementally rotate (*e.g.*, by ninety degrees within its corresponding chamber 82) around axis A and thereby alter the positional relation between blocking detent 106A or 107A relative to the corresponding blocking armature 106a, 107a or 108a”.<sup>9</sup>

Turning to page 25, Appellant further teaches that,

“The plug is configured with the electrical operator maintaining the distal member within the plug with the distal member extended not beyond the exterior surface while the distal member is in the first position, and maintaining the distal member in engagement with the cylinder while the distal member is in the second position”.<sup>10</sup>

In short, one distal end (of chamber 80)<sup>11</sup> does in fact *surround* another distal end (of armature 106a)<sup>12</sup>, and, depending upon the “orientation relative to said exterior surface obstructing said

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<sup>6</sup> Original specification, page 12, lines 15 and 16.

<sup>7</sup> Original specification, page 12, lines 18 through 20.

<sup>8</sup> Original specification, page 14, line 15.

<sup>9</sup> Original specification, page 14, lines 5-10.

<sup>10</sup> Original specification, page 25, lines 7-10.

<sup>11</sup> Original specification, page 12, line 15.

<sup>12</sup> Original specification, page 12, line 18.

relative movement when said distal member at least partially surrounds said distal member.”<sup>13</sup> Alternatively, and referring again to the foregoing excerpts from Appellant’s originally filed specification in conjunction with Figure 3, the distal end of armature 106a and its exposed recess 106c will surround the distal end of detent 106A and, depending upon the “orientation relative to said exterior surface obstructing said relative movement when said distal member at least partially surrounds said distal member.”<sup>14</sup> Although the language of claim 11 may be open to an alternate wording, that is not at issue here. In point of fact, the foregoing excerpts demonstrate that Appellant does satisfy both the written description and enablement prongs of the first paragraph of 35 U.S.C. §112 by describing how to make and use a “distal member” of Appellant’s “electrical operator”, as illustrated in at least three embodiments on 106(a), 107(a) and 108(a) in Figure 1, makes this rejection improper under both the “written description” and “enablement” requirements of the first paragraph. Appellant notes however, that there is no rejection under the second paragraph of §112 of claim 11 in the record before the Examining staff. Furthermore, the rejection is based upon a conclusory statement by the Examining staff; there is no evidence of record of an absence of either (i) a lack of enablement the subject matter of claim 11, of (ii) an absence of a written description the subject matter of claim 11, or (iii) a failure to disclose the best mode for practicing the subject matter of claim 11.<sup>15</sup> Consequently, in view of the satisfaction of the requirement for enablement of the phrases “distal member”,

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<sup>13</sup> Claim 11, penultimate and last lines. With the elected species before the Examining staff, Appellant’s “obstructing said relative movement” may be achieved by causing the “different orientation” which may be either radial or rotational, depending upon both the design of the distal portion of the armature 106a, 107a, 108a, etc. and whether the winding of the coil is that of a solenoid, a rotary motor, or alternatively, a stepping motor, or alternatively, a combination of a radial and rotational change.

<sup>14</sup> Claim 11, penultimate and last lines.

<sup>15</sup> *High Concrete Structures, Inc. v. New Enter. Stone And Lime Co.*, 377 F.3d 1379, 71 USPQ2d 1948, 1951, WL 1689152 (Fed. Cir. 29<sup>th</sup> July 2004).

this rejection may not be sustained under the first paragraph of §112.<sup>16</sup>

**B. Appellant's Originally Filed Specification Provides Both A Written Description And Enablement For The Subject Matter Defined By Claims 90 And 120**

**First**, Appellant notes that Paper No. 20080619 contains various assertions that infer that the use of the phrase *at least one*<sup>17</sup> in the Field, *et al.* '307 patent means *a plurality or more than one*. The Examiner has cited no authority under the statute to make this inference. Paper No. 20080619 has failed to demonstrate that the phrase *at least one*<sup>18</sup> as used in the Field, *et al.* '307 patent defines any number other than *one*. Attention of is invited to the complete absence of authority for the Examiner's proposition that the phrase *at least one* means any number other than *one*. Appellant's Figure 1, which displays an array of at least three electromechanical locking members 106a, 107a and 108a, all of which satisfy the definition of a locking member given by Field, *et al.* '307 in column 5, lines 1 through 8, and all or any one of which might be borne by Appellant's array of apertures 80, 82.

**Second**, Paper No. 20080619 also states that,

“the instant specification fails to provide support for the “at least one electromechanical locking member”<sup>19</sup>

Attention is invited to the illustrations in Figures, and especially Figure 1, where three distinct electromechanical locking members 106a, 107a and 108a are individually identified and described, and are collectively illustrated as an array. The structure and operation of each of these locking mechanisms are described in the originally filed specification. The attention of

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<sup>16</sup> Where the meaning of a claim is “reasonably discernable,” the claim is not indefinite. *Bancorp Servs., LLC v Hartford Life Ins. Co.*, 359 F.3d 1367, 69 USPQ2d. 1996 (Fed. Cir. 1<sup>st</sup> March 2004).

<sup>17</sup> Claim 1 of Field, *et al.* '307 reads, in part, “wherein *at least one* electromechanical locking member is disposed within the barrel ... .” Column 9, lines 5 and 6.

<sup>18</sup> Claim 1 of Field, *et al.* '307, column 9, lines 5 and 6.

<sup>19</sup> Paper No. 53, page 2, paragraph 3.

the Examining staff is invited to also note Appellant's express teachings in, among other features, that Integration of an electrical operator with a locking mechanism may be achieved by incorporation of one, or more, of electrical operators 105, 106, 107, 108<sup>20</sup> such as, to use the simplest of examples, the insertion of electrical operators 105b, 106b, 107b, 108b for pin tumblers 101b, or other types of tumblers,<sup>21</sup> into pin cylinders 80, 82<sup>22</sup>. Re-boring of one, or more, of pin cylinders 80, 82 may be necessary when retrofitting an existing lock; this will not require removal or other alteration of cylinder shell 102.<sup>23</sup> In short, Figure 1 illustrates a plurality of apertures (e.g., pin cylinders 80, 82) and a plurality of solenoids 106b, 107b and 108b, together with a plurality of tumbler pins 101b. Alternatively, claims 90 and 120 may be practiced with but a single solenoid 106b, 107b or 108b. In short, there is no basis on the record before the Office to support the assertion of the Examining staff that "the instant specification fails to provide support for the 'at least one electromechanical locking member'";<sup>24</sup> moreover, the Examining staff has submitted to the prosecution history an administrative record that is singularly devoid of either citation supporting this assertion or other rationale justifying the assertion. This rejection may not therefore be sustained.

In view of these teachings, there is no evidence of record to establish a lack of an absence of either (i) a lack of enablement the subject matter of claims 90 or 120, of (ii) an

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<sup>20</sup> Page 22, beginning with line 18.

<sup>21</sup> With a concomitant re-biting of the corresponding key to omit from the blade of the key any (or each) "tooth corresponding to the cylinder occupied by solenoid 105b". See, page 20, line 21 and page 21, lines 1 and 2.

<sup>22</sup> Page 21, lines 8 through 11 and page 22, beginning with line 18., as illustrated by Figures 1 and 8A.

<sup>23</sup> Page 21, lines 8-11 expressly teach that "In a particular practice, the diameter of one of pin cylinders 80, 82 may not be sufficiently wide to accommodate a particular solenoid and will require reboring of the cylinder. The rebored plug can still be retrofitted into an already installed cylinder however, without the necessity of removing cylinder 102."

<sup>24</sup> Paper No. 53, page 2, paragraph 3.



absence of a written description the subject matter of claims 90 or 120, or (iii) a failure to disclose the best mode for practicing the subject matter of claims 90 or 120.<sup>25</sup> Consequently, in view of the satisfaction of the requirement for enablement of the phrase “distal member”, this rejection may not be sustained under the first paragraph of §112.<sup>26</sup>

**Third**, the attention of the Examining staff is invited to the description of the *electromechanical locking member* given by Field, *et al.* ‘307:

“[a] plurality of electromechanical locking members 50, 52, 54 preferably are located within the central recess portion 42. The locking members are referred to as electroomechanical because, as described below, there are moved under the force of an electronically powered drive mechanism.”<sup>27</sup>

Wholly absent from Field, *et al.* ‘307 is any attribution of any electromechanical characteristic or property to elements 50, 52, 54; Field, *et al.* ‘307 describes elements 50, 52, 54 as passive, rather than active, components. In contradistinction, Appellant’s locking pin 201a is disclosed as a mechanical component made of a ferromagnetic material such as iron, that is moved under the force created by an electronically powered drive mechanism, namely coil 201b. Alternatively, Appellant’s “armature 106a”<sup>28</sup> contains at least one of the “grooves or slots 51, 53, 55” attributed by Field, *et al.* ‘307 to his “locking members 50, 52, 54.”<sup>29</sup> Wholly absent from Paper No. 52 is any explanation of why slots 51, 53, 55 in Field, *et al.* ‘307 provide enablement under the first paragraph of 35 U.S.C. §112 with each of elements 50, 52, 54 teaching “at least one electromechanical locking member”, while slots 107c, 108h and grooves

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<sup>25</sup> *High Concrete Structures, Inc. v. New Enter. Stone And Lime Co.*, — F.3d ----, WL 1689152 (Fed. Cir. 29<sup>th</sup> July 2004).

<sup>26</sup> Where the meaning of a claim is “reasonably discernable,” the claim is not indefinite. *Bancorp Servs., LLC v Hartford Life Ins. Co.*, 359 F.3d 1367, — USPQ2d. \_\_\_\_ (Fed. Cir. 1<sup>st</sup> March 2004).

<sup>27</sup> Field, *et al.* ‘307, col. 5, lines 65 through 67, and col. 6, lines 1 and 2.

<sup>28</sup> Shown in Figures 2 and 3.

<sup>29</sup> Field, *et al.* ‘307, col. 5, lines 5 and 6.

105n of Appellant's electromechanical components 105D, 106a, 107a and 108a do not similarly provide enablement under the first paragraph of 35 U.S.C. §112 Appellant's electromechanical components into "electromechanical locking members", when Appellant's electromechanical components 105D, 106a, 107a and 108a are disclosed as responding to an electrically driven motor or solenoid by exhibiting movement relative to a detent, or to a sidebar, or other obstruction?

Absent any basis for the Examiner's inference <sup>30</sup>, Paper No. 52 fails to satisfy the standard required under 37 CFR §1.104, and is incomplete to the extent that Appellant can not reasonably and accurately comply with the requirement for a Request under 37 CFR §1.607. Accordingly, and in view of the absence of any evidence of record establishing an absence of enablement, this rejection should not be maintained absent completion of an administrative record in compliance with 37 CFR §1.104(a) and (b) which supports this rejection; Appellant has previously requested clarification, via a supplemental to Paper No. 20080619, containing:

- An explanation of the meaning of the phrase *at least one*, as used in Paper No. 20080619.
- Identification of authority that establishes that the phrase *at least one* indicates a number greater than one under the second paragraph of 35 U.S.C. §112.
- Identification of authority that supports the Examiner's explanation in the supplemental Paper No. 20080619 of the meaning of the phrase *at least one* stated by the Examiner.
- A written explanation of the difference between an "electricomechanical locking member" and Appellant's "armatures" and "locking pins", as those terms pertain to this application.
- A written identification of the column and line number of Field, *et al.* '307 giving an explanation of any *electromechanical* property and characteristic of elements 50, 52 and 54 that defines a difference between an "electrical element", as those terms pertain to this application.

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See, for example, Paper No. 53, paragraph 3.

- A written explanation by the Examiner of why slots 51, 53, 55 in Field, *et al.* '307 convert each of elements 50, 52, 54 into "at least one electromechanical locking member", while slots 107c, 108h and grooves 105n of Appellant's electromechanical components 105D, 106a, 107a and 108a do not similarly convert Appellant's electromechanical components into "electromechanical locking members", when Appellant's electromechanical components 105D, 106a, 107a and 108a are disclosed as responding to an electrically driven motor or solenoid by exhibiting movement relative to a detent, or to a sidebar, or other obstruction?

These requested items of clarification have not been forthcoming; consequently, absent the requested clarification to the contrary, the record before the Examining staff conclusively establishes that more than one art-recognized noun may be used to describe features and components disclosed in Appellant's application. In view of the foregoing explanation and demonstration of enablement under the first paragraph of 35 U.S.C. §112, these rejections should not be sustained. Such action is respectfully requested.

**C. The rationale given in Paper No. 20080619 inaccurately interprets that explicit language of Applicant's specification**

In the rationale given by Paper No. 20080619 in support of this rejection, the Examiner writes that,

"Secondly, the specification discloses that the *plurality* of locking members 106a, 107a, 108a are used alternatively and not as a plurality within the same plug. See the specification on page 12, lines 11-13 which clearly recites the use of locking member 106a or 107a or 108a."<sup>31</sup>

The passage of Applicant's specification is a part of the *Detailed Description* that discusses the

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<sup>31</sup> Paper No. 20080619, ¶3.

details of Applicant's release mechanism which may be incorporated into Applicant's "electromechanical locks"<sup>32</sup> and "the plugs and cylinders of electromechanical locks,"<sup>33</sup> and references those mechanisms to corresponding drawings. Where the Examiner's rationale has erred is endeavoring to interpret the adjective *plurality* by reference to a re-phrasing of a single sentence taken, in isolation, from the entirety from the twenty-eight pages of Applicant's original specification; this resulted in the erroneous interpretation now found in Paper No. 20080619.

In its entirety, the passage cited by the Examiner reads,

A release assembly such as a reciprocating solenoid coil 106b driving blocking armature 106a shown in greater detail in Figures 2 and 3, or a rotary motor 108b driving blocking armature, 108a shown in greater detail in Figures 4 and 5A and 5F, or the reciprocating solenoid coil 107b of blocking armature 107a shown in greater detail in Figures 6 and 7, resides within (typically cylindrical) chamber 80.<sup>34</sup>

The structure of this passage is written in the disjunctive in order to teach the differences of structure between these constituent components. Moreover, a subsequent sentence within the same paragraph writes about Applicant's release assemblies 106, 107, and 108 in the conjunctive, aggregately, by stating that:

"Release assemblies 106, 107, and 108 are electrically connected to an electronic logic and control circuit 104b encapsulated within an electrically insulated casing 104 formed to define an outer

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<sup>32</sup> Original specification, page 1, line 11.

<sup>33</sup> Original specification, page 1, line 11.

<sup>34</sup> Original specification, page 12, lines 11-15.

sector of cylindrical plug 101.”<sup>35</sup>

Still other passages describe these constituent components either disjunctively, or conjunctively; these teachings by Applicant’s original specification is an affirmative rebuttal of the Examiner’s assertion that one passage of Applicant’s specification constitutes a disclaimer of the subject matter of the alternative of the issue of enablement, and the scope of rejected claims 90 and 120.

The fatal flaw in the Examiner’s rationale is that the Examiner is making an untimely argument that Applicant is precluded from recapturing “specific meanings disclaimed during prosecution”<sup>36</sup>, despite the fact that prosecution of the above-captioned application has yet to conclude.<sup>37</sup> Moreover, in a decision that dwelled upon the correct methodology for judicial interpretation of the language of patent claims, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki*, 520 U.S. 111 (1979), the claims defined *sealing rings* in the plural, but the accused device had but a single sealing ring. Subsequently, in *Dayco Products, Inc. v. Total Containment, Inc.*, the Federal Circuit recognized that, in context, the plural can describe a

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<sup>35</sup> Original specification, page 12, lines 120 and 21, and page 13, line 1.

<sup>36</sup> *Mangosoft, Inc., et al. v. Oracle Corporation*, slip opinion, p. 11.

<sup>37</sup> The issue argued by Paper No. 20080619 is whether Applicant has made a disclaimer or estoppel of Applicant’s right to for pending claims 90 and 120 to cover an embodiment which may cover a plurality of those constituent components. This is not an issue to be addressed at this stage of the examination under the first paragraph of 35 U.S.C. §112; rather Paper No. 20080619 should instead focus upon whether Applicant’s original specification provides enablement of one of ordinary skill in the art to both make and to use an embodiment which may cover a plurality of those constituent components?

universe ranging from one to some higher number, rather than requiring more than one item.<sup>38</sup> This holding about the enablement of the plural by a disclosure of a single species was again repeated by the Federal Circuit in its decision in *Versa Corporation v. AG-Bag International Limited*.<sup>39</sup> \_\_\_ F.3d \_\_\_ (Fed. Cir. 2004).

In summary, Applicant has demonstrated an affirmative enablement of a plurality of constituent components of Applicant's locking mechanism, the absence of any disclaimer of any disclaimer or estoppel of Applicant's right to for pending claims 90 and 120 to cover an embodiment which may cover a plurality of those constituent components, and enablement of one of ordinary skill in the art to both make and to use an embodiment which may cover a plurality of those constituent components. Consequently, Paper No. 20080619 fails to make a *prima facie* showing of a lack of enablement by Applicant's original specification of an embodiment which may cover a plurality of *locking mechanisms*. This rejection should not, therefore, be sustained. Such action is respectfully urged.

#### **Double Patenting**

**Claims 1-5, 11-13, 34, 65-69, 75, 92-100, 112, 121 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-78 of U.S. Patent No. 6,564,601 to Hyatt Jr.**

Specifically, the Examiner states that the present application and Hyatt '601 are not

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<sup>38</sup> *Dayco Products, Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1328 (Fed. Cir. 2001).

<sup>39</sup> *Versa Corporation v. AG-Bag International Limited*. \_\_\_ F.3d \_\_\_ (Fed. Cir. 2004).

patentably distinct from each other because they merely recite like elements using different terminology and/or phraseology such as “detent” instead of “bar”, and that claims 1 and 11 recite a “detent” but not a “stationary detent” and thus, the side bar detent of the patent reads on this limitation. Applicant respectfully traverses this rejection for the following reasons:

In support of this rejection the Examiner argues that,

“It is noted that claims 1 and 11 recite a ‘detent’, but not a ‘stationary detent’, and thus, the side bar detent of the patent reads on this limitation.”

In ignoring *arguendo* the absolute prohibition imposed by 35 U.S.C. §121, the Examiner appears to have confused the language of pending claims 1 and 11.

#### **Claim 1**

No claim in Applicant’s U.S. Patent No. 6,564,601 defines Applicant’s combination incorporating “an electrical operator disposed within one of said apertures ... engaging a **detent** protruding from the cylinder ... .” Moreover, and as discussed in greater detailed below in the address of obviousness rejection, neither Gokcebay ‘777, Thordmark ‘274 nor Naveda ‘127, nor any combination of these three references, discloses Applicant’s “electrical operator disposed within one of said apertures ... engaging a detent protruding from the cylinder” and “obstructing said relative movement” of the plug. There is therefore, no basis for asserting either double patenting or obviousness-type double patenting.

**Claim 11**

No claim in Applicant's '601 patent defines Applicant's "shell bearing a detent extending into said shell" in combination with Applicant's "electrical operator having a distal member moving relative to said detent ... obstructing said relative movement when said distal member at least partially surrounds said detent." Furthermore, neither Gokcebay '777, Thordmark '274 nor Naveda '127, nor any combination of these three references, teaches or discloses Applicant's combination defined in claim 11 of "said shell bearing a detent extending into said shell" and "electrical operator having a distal member ... obstructing said relative movement when said distal member at least partially surrounds said detent."

Consequently, there is no evidence of record in this administrative proceeding which would support a double patenting rejection.

Additionally, the absolute prohibition of 35 U.S.C. §121 which is discussed further below, is an absolute bar to this double patenting rejection. Its withdrawal is respectfully urged.

- 3. Claims 1 through 5, 11 through 13, 34, 65 through 69, 75, 92 through 100, 112 and 121 have been improperly rejected under the judicially created doctrine of obviousness-type double patenting based upon Appellant's divisional U.S. Patent No. 6,564,601.**

Claims 1 through 5, 11 through 13, 34, 65 through 69, 75, 92 through 100, 112 and 121 were rejected under the doctrine of obviousness type double patenting. This rejection is improper, and may not be sustained, particularly here, where several claims in the above-captioned application remain finally withdrawn from consideration under 35 U.S.C. §121 and



37 CFR 1.142(b).

Although this rejection purports to be based upon the judicial doctrine of obviousness-type double patenting, by maintaining this rejection, the Examining staff has ignored not only the express statutory prohibition of 35 U.S.C. §121 against this rejection, but all of the judicial interpretations of that statutory prohibition; no Court has modified the judicially created doctrine of obviousness type double patenting by holding that the Examining staff is authorized to ignore 35 U.S.C. §121. By way of example, in *Geneva Pharmaceuticals, Inc. v. Glaxo SmithKline PLC*,<sup>40</sup> the Court announced a two part test governing when 35 U.S.C. §121 bars an obviousness-type double patenting rejection. First, each claim of Appellant ‘601 patent appeared in the instant application. Second, the Examiner actually imposed, maintained, and continues to maintain a requirement under 37 CFR §1.146 for an election of species, arguing that no generic claims were allowable. Subsequently, Appellant’s divisional application was filed to present claims which were indicated by the Examiner to be allowable in the above-captioned application, and those claims were passed to issue in Appellant’s ‘601 patent.

Where, as here, the ‘601 patent is in conformance with 35 U.S.C. §121, and “was an application filed as a result of such a requirement ...”, the resulting ‘601 patent “*shall not* be used as a reference ... in the Patent and Trademark Office ... against ... the original

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<sup>40</sup> *Geneva Pharmaceuticals, Inc. v. Glaxo SmithKline PLC*, 349 F.3d 1373, 68 USPQ2d 1865 (Fed.Cir. 21<sup>st</sup> November 2003)

application.”<sup>41</sup> The Examiner’s requirement for restriction has never been withdrawn.<sup>42</sup> Accordingly, 35 U.S.C. §121 bars this rejection and the Examiner is respectfully requested to refuse to sustain this rejection of claims 1 through 5, 11 through 13, 34, 65 through 69, 75, 92 through 100, 112 and 121 under the doctrine of obviousness-type double patenting.

### **Claims 1 Through 5**

In support of the rejection, the Examiner asserts that,

“the conflicting claims are not identical, they are not patentably distinct from each other because they merely recite like elements using different terminology and/or phrasology such as ‘detent’ instead of ‘bar’. It is noted that claims 1 and 11 recite a ‘detent’, but not a ‘stationary detent’, and thus side bar detent of the patent reads on this limitation.”

The Examiner has misinterpreted the basis for the Election of Species detailed in Paper No. 37, set forth in the corrected Decision on Petition. Independent claim 1, by way of example, defines “an electrical operator ... obstructing said relative movement ***by engaging a detent protruding from the cylinder.***” Appellant notes that claim 1 already defines a “side bar”, and separately defines an “electrical operator” as engaging a “detent protruding from the cylinder.” This feature and cooperation between constituent components is not present in the claims of Appellant’s later filed U.S. 6,564,601. The attention of the Examiner is directed to the

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<sup>41</sup> 35 U.S.C. §121.

<sup>42</sup> In *Geneva Pharmaceuticals., Inc.*, no requirement for restriction had ever been imposed. In the above-captioned application however, evidence of the actual and continued imposition of a requirement for restriction by the Examining staff in the instant application, Paper No. 08042005 dated on the 5<sup>th</sup> of August 2005, states that “claims 43-45, 73, 94 [sic] are withdrawn from consideration.”

embodiments of the species including Figure 1, where detents 106A, 107A are borne by cylinder 102, rather than by plug 101. None of claims 1 through 78 set forth in the Appellant's later filed U.S. 6,564,601 define these features. The fact that one divisional patent is directed to a patentably distinct and independent species does not forestall the right of the Appellant under 35 U.S.C. §121 to claim one, or more, genius. Consequently, the Examiner's assertion that the claims differ from those claims in Appellant '601 patent solely in terminology or phraseology is misplaced. These features are wholly absent from the claims set forth in Appellant's '601 patent. Accordingly, and recognizing the inadequacy of the administrative record before the Examiner and the inability of Paper No. 20080619 to identify the features in any of the issued claims, this rejection may not be sustained.

### **Claims 11 Through 13**

Independent claim 11 defines, *inter alia*, "an electrical operator ... obstructing said relative movement when said distal member at least partially surrounds ... ." This feature defines the electrical operator with features such as those illustrated in Figure 1 by 106a, 107a and 108a. In contradistinction, the claims of Appellant's '601 patent nowhere define these features and functional operations. The complete absence of any allegation in Paper No. 20080619 that any particular claims in '601 contain such features, is convincing evidence of absence of obviousness-type double patenting. The Examiner is respectfully requested to refuse to sustain this rejection.

### **Claim 34**

Appellant notes that claim 34 defines a "side bar", and separately defines an "electrical

operator” as engaging a “detent protruding from the cylinder.” This feature and cooperation between constituent components is not present in the claims of Appellant’s later filed U.S. 6,564,601. Moreover, Appellant’s own work represented by his ‘601 patent can not serve as a basis for establishing obviousness; there is therefore, no evidence of record before the Examiner showing obviousness between any of the claims of Appellants’ ‘601 patent and claim 34. The Examiner is respectfully requested to refuse to sustain this rejection.

**Claims 65 Through 69**

Claim 65, as well as dependent claims 66 through 69, among other distinctions, define “an electrical operator comprising an armature, said armature ... rotating around said longitudinal axis with said plug ... .” This, among other features, is not present in the independent claims of Appellants’ ‘601 patent. Appellant’s own work represented by his ‘601 patent can not serve as a basis for establishing obviousness; there is therefore, no evidence of record before the Examiner showing obviousness of claims 65 through 69 over any of the claims of Appellants’ ‘601 patent. The Examiner is respectfully requested to refuse to sustain this rejection.

**Claim 75**

Claim 75, among other distinctions, defines “an electrical operator ... electrically operable to respond to said control signal by moving along a radial axis that is traverse to said radial plane ... .” This feature of the elected specie, is not present any of the independent claims of Appellant’s own work represented by his ‘601 patent, and Applicant’s own work may not serve as a basis for establishing obviousness; there is no evidence of record before the Examiner

showing obviousness of claim 75 over any of the claims of Appellants' '601 patent. The Examiner is respectfully requested to refuse to sustain this rejection.

**Claims 92 Through 99**

Claim 92, upon which claims 93 through 99 depend, is closest in text and language to claim 62 of Appellant's '601 patent. Unlike claim 62, rejected claim 92 defines a "bar interposed between said shell and said cylinder plug, while allowed claim 62 defines a "detent." Moreover, claim 92 had been pending for about twenty-one months in the above-captioned application when claim 62 and Appellant's '601 patent was filed on the 4<sup>th</sup> of February 2002. Given the circumstances under which claim 62 was filed, 35 U.S.C. §121 bars this rejection and the Examiner is respectfully withdraw this rejection of claims 92 through 99.

**Claim Rejections - 35 U.S.C. §103**

4. **Claims 25, 26, 28, 30 through 33, 39 through 42, 46 through 52, 54, 56, 64, 70, 76, 77, 90, 91, 105, 108, 109, 111, 113 through 116, and 119 through 121 are patentably distinguishable and allowable under 35 U.S.C. §103(a) over a proposed combination of Gokcebay, U.S. Patent No. 5,552,777 in view of Thordmark *et al.*, U.S. Patent No. 5,542,274 and Naveda, U.S. Patent No. 4,416,127.**

This rejection of claims 25, 26, 28, 30 through 33, 39 through 42, 46 through 52, 54 through 56, 64, 70, 76, 77, 82-84, 90, 91, 105, 107, 108, 109, 111, 113 through 116, and 119 through 121 is untenable under 35 U.S.C. §103(a) when the Examiner's proposed combination of Gokcebay, U.S. Patent No. 5,552,777 modified according to Thordmark *et al.*, U.S. Patent No. 5,542,274 and Naveda, U.S. Patent No. 4,416,127, is carefully considered. Accordingly, Applicant respectfully traverses this rejection for the following reasons:

Claims 25, 26, 28, 30 through 33, 39 through 42, 46 through 52, 54, 56, 64, 70, 76, 77, 90, 91, 105, 108, 109, 111, 113 through 116, 119, 120 were all rejected under 35 U.S.C. §103(a) as rendered obvious, and unpatentable, by the Examiner's proposed combination of Gokcebay U.S. 5.552.777 modified according to Thordmark U.S. 5.542.274 and Naveda U.S. 4.416.127. This proposed combination is improbable, is unsupported by any evidence of motivation in the record before the Examiner, and fails to provide a *prima facie* showing of obviousness; the Examiner is respectfully urged to refuse to sustain this rejection for the following reasons.

**A. The Rejection Under 35 U.S.C. §103 Errs By Considering The Individual Component References Of The Proposed Combination Piecemeal, And Thus Failing To Consider The Proposed Combination As A Single Entity**

In assembling the three exemplars of the art drawn to form the Examiner's proposed combination, Paper No. 20080621 makes a piecemeal consideration each reference, and merely identifies individual teachings about those references, thus failing to consider the proposed combination. By way of example of the flaw in this failure, Paper No. 20080619 erroneously reasons that,

“Naveda reinforces that one having ordinary skill in the art ... would have known of the versatility and interchangeability of known elements usable in verifying and actuating electric lock cylinders including among others, miniature coils, miniature electromagnets, electronic memories [*sic* ,] bioelectric circuits, resistance plates and the like (col. 3, line 1-13 and col. 4, lines 30-35).”

Based upon this casuistry, Paper No. 20080619 erroneously concludes that therefore,

“It would have been obvious to one of ordinary skill in the art to replace the simple blocking element of Gokcebay with the multi-part electrically actuated blocking element of Thordmark *et al.* to

thwart natural attempts to force system locks that are equipped with electronic blocking functions, of the kind meant by Thordmark (col. 1, lines 38-42), by making forcing of such locks more difficult. It would have further been an obvious reversal of parts and change of size to select miniature logic circuitry and a miniature solenoid and locking member 11 such that the blocking mechanism fits within a conventional sized lock plug as taught by Gokcebay and Naveda.”

The fallacy of Paper No. 20080619’s casuistry lies in the observation that regardless of the use of the term “miniaturization” by the proposed combination, the source of this term, Naveda ‘127, teaches “a practical embodiment” that, as illustrated by Naveda ‘127’s Figure 10, three (3) parallel rotating shafts, as opposed to the single rotating cylinder plugs of Applicant’s , Gokceby U.S. 5.522.77 and Thordmark U.S. 5.542.274. Utterly unexplained in Paper No. 20080619 is precisely how a tripling of the number of parallel rotating components might be said to teach “miniaturization” in any sense of that word?

Moreover, in the Examiner’s proposed combination, nothing teaches either:

“an obvious reversal of parts and change of size”; or

“an obvious ... change of size; or

how “to select miniature logic circuitry and a miniature solenoid and locking member 11 such that the blocking mechanism fits within a conventional sized lock plug.”

Although these deficiencies in the Examiner’s proposed combination are merely exemplary of the inadequacy of the prior art to render Applicant’s claims obviousness, these deficiencies illustrating the glaring incompleteness of in the Examiner’s refusal to consider the “subject matter sought to be patented as a whole” and the “differences between the subject matter sought

to be patented and the prior art” as is mandated by 35 U.S.C. §103(a).

Equally unclear is why the pending claims raise questions of “reversal or parts” or “change of size” or whether the practice of the pending claims would raise an issue of whether embodiments of these claims would provide a “blocking mechanism fits within a conventional sized lock plug”? Applicant submits that the Examiner appears to have lost sight of the definitions of the pending claims as well as the explicit requirement of 35 U.S.C. §103(a).

Applicant further submits therefore, and ignoring *arguendo* the absence of any teaching for making the Examiner’s proposed combination except an impermissible hindsight reconstruction in the light provided by Applicant’s rejected claim, Applicant’s pending claims define a patentably distinguishable structure, and process, constructed of non-obvious constituent components. Where, for example, in the Examiner’s proposed combination, is Applicant’s “*locking mechanism disposed with said apertures ... obstruction said reciprocation [of said sidebar]*” in combination with Applicant’s “*electrical operator disposed within one of said apertures ... obstructing said relative movement [between the cylinder and said plug]*”, as defined by claim 1? These deficiencies in the art are glaring, and scream against the Examining staff’s inadequate compliance with 35 U.S.C. §103(a). Consequently, the explicit teachings of the Examiner’s proposed combination fail to provide the combination asserted by Paper No. 20080619.

**B. The Rejection Under 35 U.S.C. §103 Ignores The Explicit Requirements Of 35 U.S.C. §103(a) For A Showing Of Obviousness**

The Examiner should pause to consider that applicant’s claim 1, by way of example, is



not the type of claim found in *KSR Int'l Co. v. Teleflex Inc.*<sup>43</sup> were every element, that is, both the electrical switch and the brake pedal assembly, were standard off-the-shelf items that had been previously used in the same industry, for the same purpose, for many years, to achieve the same result. In *KSR*, neither the claim when read in its entirety, nor the two paragraphs that defined the switch and assembly, did anything more. Consequently, and in conformance with the precedential principles laid down by *Hotchkiss v. Greenwood*,<sup>44</sup> affirmed its principle of the “functional approach” that “[t]he combination of familiar elements according to known method is likely to be obvious when it does no more than yield predictable results.”<sup>45</sup>

Here, and unlike *KSR*, the Examining staff has failed to show that not even one of the constituent elements of Applicant’s claim 10 has ever been known in the art, and has failed to show either the structure (namely, Applicant’s Where, for example, in the Examiner’s proposed combination, are (i) Applicant’s “locking mechanism disposed with said apertures ... obstructing said reciprocation [of said sidebar]” in combination with Applicant’s “electrical operator disposed within one of said apertures ... obstructing said relative movement [between the cylinder and said plug]” where those *apertures* are defined as being formed in the cylinder plug, as defined by claim 1, and (ii) the concomitant operational functions defined by claim 10 (such as Applicant’s “locking mechanism disposed with said apertures **to move relative to said**

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<sup>43</sup> *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1739, 82 USPQ2d @1395 (2008).

<sup>44</sup> *Hotchkiss v. Greenwood*, 11 Howard 248.

<sup>45</sup> *Ex parte Mary Smith*, Appeal No. 2007-1925 (BPAI 2007).

**plug**” in combination with Applicant’s “*electrical operator disposed within one of said apertures ... having a distal member travelling in dependenece upon said control signals*”), or (iii) the results provided by these structures and their operational features (namely, Applicant’s “*obstructing said reciprocation [of said sidebar]*” and Applicant’s “*obstructing said relative movement [between the cylinder and said plug]*” defined by claim 10) attained by these operational functions performed by this structure of claim 1 have ever existed in the art outside of Applicant’s specification. The Examiner is urged to consider that the procedural standard established by 35 U.S.C. §103(a) requires that “the **differences** between the subject matter sought to be patented and the prior art” must be identified; that standard has not been met here where the outstanding Office action as attributed to the Examiner’s proposed combination the nomenclature, operational functions and results attained when these properties can not be found by a thorough reading of that proposed combination. To paraphrase the Board of Appeals, how may this art be said to teach these features of claim 1 when that art does not use the words of claim 1? These deficiencies in the art are the “differences” which must be identified under 35 U.S.C. §103(a). Absent any identification of these “differences” in the administrative record for this application, the procedural standard of 35 U.S.C. §103(a) has not been met. Consequently, there is no *prima facie* showing of obviousness on the administrative record before the Office. Withdrawal of this rejection is therefore respectfully urged.

**C. The Rejection Under 35 U.S.C. §103 Fails To Make A Prima Facie Showing Of Obviousness**

According to MPEP 706.02(j), the following establishes a *prima facie* case of

obviousness under 35 U.S.C. §103:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

These standards imposed by MPEP §706.02(j) are not met, as is demonstrated by the following cursory review of the explicit language of the pending claims.

**Claim 25**

Nothing in the Examiner's proposed combination suggests Applicant's "stationary bar borne by said shell and interposed between said shell and said cylinder plug to create an obstruction to rotation" in combination with Applicant's "electrical operator borne by said cylinder plug ... maintaining obstruction of said relative movement by engaging said bar." In point of fact, the proposed combination in each of the references in the combination are devoid of any "stationary bar borne by said shell."

**Claim 46**

A thorough review of the Examiner's proposed combination demonstrates that that combination is devoid of Applicant's "bar borne by said plug ... to reciprocate generally along a radial plane" in combination with Applicant's "electrical operator ... moving within the second and different plane not coextensive with said radio plane ... to accommodate said movement of

said bar ... .”

**Claim 56**

An exhaustive reading of the Examiner’s proposed combination also demonstrates that the proposed combination lacks Applicant’s “elongate member interposed ... to travel generally along a radial direction” in combination with Applicant’s “electrical operator ... moving independently of said travel by said elongate member in a second direction within a plane that maintains said simultaneous engagement but is not aligned with said radial direction ... while said electrical operator is contained wholly within said plug ... .” In point of fact, the electrical operator of the primary reference must extend beyond the plug, and modification of the primary reference to contain the electrical operator “wholly within the said plug” is defined by claim 56 would impermissively prevent the primary reference from operating in its intended mode.

**Claim 64**

The Examiner’s proposed combination lacks Applicant’s “a sidebar interposed ... to travel generally along a radial plane ... while obstructing rotation” in combination with Applicant’s “an electrical operator borne by said cylinder plug ... moving in a different plane independently of said travel by said sidebar” and in combination with “said sidebar having a first portion that is positioned to be optionally blocked by another component of said lock functioning independently of said electrical operator.”

Additionally, consideration must be given to the fact that in each of the elements of the Examiner’s proposed combination, any “sidebar” that cooperates with an “electrical operator” is unable to be “optionally blocked by another component of said lock functioning

independently of said electrical operator.” This feature is wholly absent from the Examiner’s proposed combination.

**Claim 70**

The Examiner’s proposed combination is devoid of Applicant’s “bar interposed ... to travel generally along a radial plane ... while obstructing rotation” in combination with Applicant’s “electrical operator ... moving along a geometrical construct other than to said radial plane... .” In point of fact, the Examiner’s proposed combination consistently teaches structures with movement of both the electrical operator and any bar being wholly within a single plane of movement. Any deviation from that single plane of movement would impermissibly destroys the operability of the Examiner’s proposed combination.

**Claims 76 and 77**

The Examiner’s proposed combination lacks Applicant’s “elongate bar exhibiting a greatest longitudinal dimension along a second axis that extends transversely to said first base and to said second base ... to travel generally along a radial axis that is transverse to said second axis” in combination with Applicant’s “electrical operator ... moving along said radial axis.” In point of fact, the primary reference in the Examiner’s proposed combination necessarily travels along a radial axis that is coaxial with its greatest longitudinal dimension. Consequently, the definitions provided by claims 76 and 77 are not met.

Ignoring *arguendo* that the evidence of record demonstrates persuasively that the U.S. PTO has already found claim 90 to be patentably distinguishable over the art and has issued claim 90, nothing in the Examiner’s proposed combination teaches Applicant’s

“electromechanical locking member disposed in the barrel ... positionable to permit the sidebar to engage the locking member in a non-barrel blocking position” and “an electronically powered drive mechanism cooperating with the electromechanical locking member to selectively move the locking member from the barrel blocking position to the non-barrel blocking position.” The complexity of this concept is not found in the Examiner’s proposed combination. Consequently, this rejection may not be maintained.

**Claim 91**

Examination of the Examiner’s proposed combination is devoid of Applicant’s combination of a “bar interposed between said shell and said cylinder plug to reciprocate generally along a radial plane”, “locking mechanism ... hindering said reciprocation” and “electrical operator ... moving independently of said bar ... providing obstruction of said reciprocation by said bar ... .” In contradistinction, the Examiner’s proposed combination critically relies upon an electrical operator that has no physical or cooperational relationship with the combination of a locking mechanism in a bar interposed between said shell and said cylinder plug, as taught by Applicant’s claim 91.

**Claim 120**

The proposed combination is also devoid of Applicant’s “elongated, generally cylindrically shaped barrel member having ... an interior containing a plurality of electromechanical locking members ... being movable to a position in which the grooves of the locking members are aligned” in combination with “an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking members to a

position in which the grooves of the locking members are aligned.” Applicant notes that the Examiner has never addressed these features of claim 120, and the thorough reading of the Examiner’s combination fails to reveal the structure defined by claim 120.

**Claim 121**

The proposed combination is also devoid of Applicant’s “a bar interposed between said shell and a cylinder plug detent **extending radially from a second recess within said shell into a passage within said cylinder plug to create an obstruction to rotation**” in combination with Applicant’s “electrical operator borne by said cylinder plug ... moving independently of said detent ... accommodating relative movement between said detent and said cylinder plug and ... maintaining obstruction of said relative movement by engaging said detent.” In point of fact, not only is there no bar as defined by claim 121 in the Examiner’s proposed combination, there is no electrical operator “engaging said detent” as defined by claim 121.

**Claims 46-52, 56, 64, 70, 76, 77, 90, 91, 105 and 119**

**First**, although the record before the Examiner has recognized that the combination including Gokcebay ‘777 fails to either teach or suggest:

“a bar/detent which moves radially to the axis of the plug and the electronic operator having an electronic locking member which moves independently of the movement of the bar/detent which is reciprocated between a blocking and releasing position as a result of independent movement of the locking member.”

The record subsequently concludes however, that:

“[i]t would have been obvious ... to replace the simple blocking

element of Gokcebay with the multipart electrically actuated blocking element of Thordmark et al to thwart natural attempts to force system locks ... [i]t would have further been an obvious reversal of parts and change of size to select miniature logic circuitry and a miniature solenoid and locking member 11 such that the blocking mechanism fits with a conventional sized lock plug as taught by Gokcebay and Naveda.”

Entirely ignored by the Examiner’s proposed combination is that Appellant’s claims 46 through 52 define “a bar borne by said plug and rotatable with said plug relative to said shell”, while claim 56 defines “a shell containing a hollow recess ... [and] an elongate member interposed between said shell and said plug ... in response to a torque that is externally applied to said plug and causes rotation ... exiting said recess”<sup>46</sup> while a comparable feature is defined by dependent claim 119, and claim 64 defines “a sidebar ... to travel generally along a radial plane ... [and] an electrical operator ... moving in a different plane independently of said travel by said sidebar”<sup>47</sup> and claim 105 defines “orienting said side bar to travel along a plane ... [and] positioning said locking member to move on an axis that is approximately perpendicular to said

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<sup>46</sup> Despite the requirement of 37 CFR §1.104(b)(2) for identifying the “particular part” relied upon to support a rejection, Paper Nos. 39 and 53 are silent upon these details. It appears that in the proposed combination including the second “elongate member” 10, or even 11 of Thordmark ‘274, that second “elongate member” 10, or 11 must necessarily remain with the recess, or bore, provided by the outer shell of the lock in order for the cylinder plug to rotate. This is contrary to Appellant’s claims, and prevents a true retro-fit of a lock cylinder without also a concomitant re-machining, or complete replacement of the outer shell. Moreover, this combination fails to meet the express language of claim 56.

<sup>47</sup> Again, Papers Nos. 39 and 53 pay no moment to the requirement of 37 CFR §1.104(b)(2) for identifying the “particular part” relied upon to support a rejection. In the proposed combination including Thordmark ‘274, the second “sidebar” 10 must necessarily move with the identical same plane as solenoid 17 (in Fig. 7) or motor 12 (in Figs. 3, 4 and 5), contrary to the express teaching of Appellant’s claim 64.



plane.”<sup>48</sup> Moreover, claim 70 defines “a bar ... to travel generally along a radial plane ... [and] an electrical operator borne by said cylinder plug ... moving along a geometric construct *other than* to said radial plane ... .”<sup>49</sup> Even ignoring *arguendo* that the primary reference is singularly devoid of any structure for bearing a detent, sidebar or bar, and that the Examiner’s proposed combination would impermissibly prevent the primary reference from operating in its intended mode of operation by obstructing the ability of the “block pin 38” of “small solenoid 36” of the primary reference to engage its cylinder shell 46, the Examiner’s proposed combination lacks teaching or suggestion of claim 46’s “bar borne by said plug and rotatable with said plug relative to said shell”, claim 56’s (and a similar feature defined by claim 119) “shell containing a hollow recess ... [and] an elongate member interposed between said shell and said plug ... in response to a torque that is externally applied to said plug and causes rotation ... exiting said recess”<sup>50</sup>, claim 64’s “sidebar ... to travel generally along a radial plane ... [and] an electrical

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<sup>48</sup> In the proposed combination including Thordmark ‘274, the second “sidebar” 10 must necessarily move within the identical same plane as solenoid 17 (in Fig. 7) or motor 12 (in Figs. 3, 4 and 5), contrary to the express teaching of Appellant’s claim 64.

<sup>49</sup> In the proposed combination including Thordmark ‘274, the second “sidebar” 10 must necessarily move within the identical same plane as solenoid 17 (in Fig. 7) or motor 12 (in Figs. 3, 4 and 5), contrary to the express teaching of Appellant’s claim 105.

<sup>50</sup> In the proposed combination including the second “elongate member” 10, or even 11 of Thordmark ‘274, that second “elongate member” 10, or 11 must necessarily remain with the recess, or bore, provided by the outer shell of the lock in order for the cylinder plug to rotate. This is contrary to Appellant’s claims, and prevents a true retro-fit of a lock cylinder without also a concomitant re-machining, or complete replacement of the outer shell. Moreover, this combination fails to meet the express language of claim 56.

operator ... moving in a different plane independently of said travel by said sidebar”,<sup>51</sup> and claim 70’s “bar ... to travel generally along a radial plane ... [and] an electrical operator borne by said cylinder plug ... moving along a geometric construct *other than* to said radial plane ...”; consequently the Examiner’s proposed combination fails to make a *prima facie* showing of obviousness as is required by the third criteria of the *MPEP* §706.02(j).<sup>52</sup>

**Second**, in the Examiner’s proposed combination, the placement of a “detent”, “sidebar” or “elongate bar” between the solenoid of the primary reference and the cylinder shell would impermissibly prevent the primary reference from being operated in its intended mode of operation with its solenoid 36 moving a “blocking pin 38”<sup>53</sup> engaging<sup>54</sup> “a bore or recess 50”<sup>55</sup> in the cylinder shell; its is these critical features with “an elongate bar ... interposed between said shell and said cylinder plug” which are expressly defined by Appellant’s claims 76, 77, 90 and 91. Consequently, this rejection is based upon an impermissible modification of the primary reference, and may not be maintained.

**Third**, the earlier noted fact that the Examiner’s proposed modification of the primary

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<sup>51</sup> In the proposed combination including Thordmark ‘274, the second “sidebar” 10 must necessarily move within the identical same plane as solenoid 17 (in Fig. 7) or motor 12 (in Figs. 3, 4 and 5), contrary to the express teaching of Appellant’s claim 64.

<sup>52</sup> Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP* §706.02(j).

<sup>53</sup> Gockebay ‘777, column 6, line 46.

<sup>54</sup> Gockebay ‘777, column 6, lines 45 and 46, “ Fig 3, show[s] a bore or recess 50 into which the blocking pin 38 extends in the blocking position.”

<sup>55</sup> Column 6, line 49.

reference would prevent the primary reference from being operated in its intended mode of operation, is itself convincing *indicia* of the non-obviousness of these claims.<sup>56</sup>

**Fourth**, there is no evidence of record for modifying the primary reference in the manner asserted by the Examiner, except through a hindsight reconstruction of the art in the light provided by Appellant alone. In the Examiner's proposed combination, only Thordmark '274 discloses a movable locking member cooperating with any electrical operator; that movable locking member 11, as well as "latching member 10", is however, borne by the cylinder shell, and not, as defined by Appellant's claims, borne by, or mounted upon, the plug. Naveda '127, which is a rather large case lock, in terms of the physical volume occupied by shell, or housing, of the lock in comparison to the primary reference, is utterly devoid of any cylinder plug, is bereft of a suggestion of a detent or sidebar, and contributes nothing to this proposed modification of the primary reference. In short, there is no evidence of record showing motivation for making the Examiner's proposed combination, and Naveda '127 does nothing to remedy these deficiencies noted in the primary and secondary references. The Federal Circuit has repeatedly emphasized that:

"[t]he test for obviousness is not whether the features of one reference may be bodily incorporated into another reference... Rather, we look to see whether combined teachings render the claimed subject matter obvious." *In re Wood*, 599 F.2d 1032, 202 USPQ 171, 174 (CCPA 1979) (citing *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549-50 (CCPA 1969); *In re Mapelsden*, 329

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<sup>56</sup>

The Examiner's proposed combination would impermissibly prevent the primary reference from operating in its intended mode of operation by obstructing the ability of the "block pin 38" of "small solenoid 36" of the primary reference to engage its cylinder shell 46.

F.2d 321, 322, 141 USPQ 30, 32 (CCPA 1964).

Here, there is no actual teaching in the Examiner's proposed combination for shifting "a spring biased sidebar 10" anywhere; the primary reference does not require a sidebar and can not fit a sidebar between its blocking pin 38 and its recess 50 without interfering with functional operation; Thordmark '274 already has a "side-bar 7" which has no disclosed relation with its "electronic operator 12"; and Naveda '127 neither discloses nor indicates any need for a sidebar, whether biased or unbiased.<sup>57</sup> Absent the requisite evidence of motivation for making the Examiner's proposed combination, this rejection may not be sustained.<sup>58</sup>

**Claims 46, 56, 64, 70, 76, 77, 90, 120 and 121**

Independent claim 46 defines "a cylinder plug" with, among other features, "a bar borne by said plug ... and an electrical operator ... moving ... to accommodate said movement of said bar ... ." Claims 56, 64, 70, 76, 77, 90, 120 and 121 use alternative language to define other aspects of this feature. In contradistinction, the Examiner's proposed combination includes a primary reference which requires "a solenoid 36 which is effective *to retract* a blocking pin 38

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<sup>57</sup> The Examiner's reliance upon Naveda '127 as ostensibly teaching miniaturization is evidence of a misguided understanding of the relevant art: the structure of the case lock taught by Naveda '127 is necessarily huge, and substantially external to any cylinder component, when compared to the cylinder locks of Appellant and the primary reference.

<sup>58</sup> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. ... The teaching or suggestion to make the claimed combination and the reasonable expectation of success ***must both be found in the prior art and not based on Appellant's disclosure.*** In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Emphasis added.

when energized”<sup>59</sup> in combination with Appellant’s “bore or recess 50 into which the blocking pin extends in the blocking position.”<sup>60</sup> The degree of completeness required by 37 CFR §1.104(b) in Paper No. 8 is unfortunately absent; there is no evidence of record explaining how the proposed combination can have “solenoid 36” respond to a data signal “by releasing said detent to move” as is required by Appellant’s claim 46, when the primary reference teaches that “solenoid 36” response to application of an electrical current by *holding* “blocking pin 38” in a retracted position when solenoid 36 is “energized”? Despite Appellant’s request in response to Paper No. 39 for clarification under 37 CFR §1.104(a)(b) and (c), no explanation has been forthcoming. Absent the requested clarification, this rejection may not be sustained.

Alternatively, if the Examiner has intended to assert that the proposed combination may be constructed with a wholesale substitution of “electrical operator 12, a movable electronic [*sic*] locking member 11” and latch 10 for the primary reference’s “electrical operator 36 ... [and] member 38”, the Examiner’s proposed combination is flawed because it impermissibly prevents the primary reference from operating in its intended mode of operation with “a bore or recess 50 [drilled into, or preferable through cylinder shell 46] into which blocking pin 38 extends in the blocking position” (*i.e.*, to directly and securely engage the cylinder shell) and concomitantly impermissibly prevents the primary reference from retentively holding “blocking

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<sup>59</sup> Gockebay ‘777, column 5, lines 55, 56.

<sup>60</sup> Gockebay ‘777, column 6, lines 45 and 46.

pin 38” in a retracted position when energized.<sup>61</sup> There is no evidence of record teaching this construction and concomitant modification of Gokcebay ‘777, except that provided by Appellant’s claims alone among the art.<sup>62</sup> The mandate for completeness in the administrative record set forth 37 CFR §1.104(a), (b) and (c) has not been met here because Paper Nos. 39 and 53 fail to explain how the proposed combination might be constructed to preserve the teaching of the primary reference for “a bore or recess 50 [drilled into, or preferable through cylinder shell 46] into which blocking pin 38 extends in the blocking position” (*i.e.*, to directly and securely engage the cylinder shell) and concomitantly impermissibly prevents the primary reference from retentively holding “blocking pin 38” in a retracted position when energized. Clarification was previously requested, but was not provided. Consequently, the record before the Examiner does not support this rejection. Refusal to sustain this rejection is respectfully requested.

Under 35 U.S.C. §103(a),

“combining prior art references without evidence of such a

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<sup>61</sup> Under U.S. practice, these teachings of Gockebay ‘777 may not be ignored by the Examiner when constructing the proposed combination. According to MPEP §2141.02, “A prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Construction of the Examiner’s proposed combination to eliminate these features of Gockebay ‘777 is improper under 35 U.S.C. §103(a).

<sup>62</sup> The Examiner’s “obvious reversal of parts and change of size to select miniature logic circuitry and a miniature solenoid and locking member 11 such that the blocking mechanism fits with a conventional sized lock plug as taught by Gokcebay and Naveda” is fictitious and illusory, because there is no evidence of record which either teaches or suggest the “obvious reversal.”

suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability. *In re Dembiczak*, 175 F.3d 994, 50 USPQ.2d 1614 (Fed. Cir. 1999).

Consequently, this alternative construction is untenable, not only because it impermissibly prevents the primary reference, as modified by the two secondary references, from operating in its intended mode of operation, but also because neither of the two secondary references provide the specific motivation to construct Appellant's "a plug" with, among other features, "a detent disposed between said plug and a cylinder ... an electrical operator borne by ... and rotating with said plug ... releasing said detent to move ... ." Given this failure of a *prima facie* requisite showing of the obviousness under the criteria of §706.02(j) of the *Manual*,<sup>63</sup> the Examiner is respectfully requested to refuse to sustain this rejection.

#### **Claim 46**

Claim 46 was rejected under 35 U.S.C. § 103(a) as rendered obvious by proposed combination of Gokcebay '777 modified according to the Thordmark U.S. 5,542,274 in view of Naveda U.S. 4,416,127. Appellant respectfully traverses this rejection for the following reasons.

**First**, the lock defined by claim 46 has a "bar borne by said plug ... interposed between

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<sup>63</sup> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. ... The teaching or suggestion to make the claimed combination ... ***must ... be found in the prior art and not based on Appellant's disclosure.*** *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

said shell and said cylinder plug to reciprocate generally along a radial plane” in combination with “an electrical operator ... obstructing movement of said bar ... in response to a first state of said control signal and by moving within a second and different plane not coextensive with said radial plane in response to application of said control signal ... .” The Examiner neglected to explain how movement in different planes could be obtained by the proposed combination; in fact, all movement in the proposed combination exists within the same plane. That is, how can the Examiner’s proposed combination be configured so that moveable coil 17 and blocking element 11 of Thordmark ‘274 move along non-aligned planes, a feature that provides a mechanical advantage and heightened security that is not available with the proposed combination. Accordingly, there is no *prima facie* showing of obviousness, and claim 46 is readily patentably distinguishable over the prior art.

**Second**, and as earlier noted, Appellant’s lock defined by claim 46 has a “bar *borne by said plug* ... interposed between said shell and said cylinder plug to reciprocate generally along a radial plane” in combination with,

“an electrical operator ... obstructing movement of said bar ... in response to a first state of said control signal and by moving within a second and different plane not coextensive with said radial plane in response to application of said control signal ... .”

These features are wholly absent from the Examiner’s proposed combination because the modification of Gokcebay ‘777 made by the Examiner has a “latching element 10, therewith enabling the latching element [10 of the proposed combination] to be pressed *radially outwards as the plug 3 is turned with the key 4.*” Thordmark ‘274, col. 5, lines 24-26. Whether by some



force of magic or by simple hindsight reconstruction of the art, if moving coil 17 is somehow incorporated into cylinder plug 24 of Gokcebay '777, that same radially outward motion will remain as a constant. The fact that latching member 10 can not both travel *radially outwardly* as the cylinder plug rotates as is taught by the Examiner's proposed combination and be carried by the cylinder plug as the plug rotates as is defined by Appellant's claim 46, prevents the Examiner's proposed combination from providing Appellant's "bar borne by said plug ... interposed between said shell and said cylinder plug to reciprocate generally along a radial plane ... ." This difference is not trivial and must be considered in determining obviousness *vel non* because it is this difference that enables Appellant's bar to be carried with the cylinder plug and to cooperate with another locking mechanism carried by the cylinder plug. The Examiner's combination can no provide this advantage. Accordingly, claim 46 is patentably distinguishable and allowable.

#### **Claims 14 and 43**

The record before the Examiner demonstrates that the Examining Staff has impermissibly neglected to examine "the subject matter" of claims 14 and 43 "as a whole" as required under the first paragraph of 35 U.S.C. §103. Specifically, the secondary locking mechanism of both Gokcebay '777 and Thordmark '274 operate wholly, completely and independently of their respectively pin tumblers and side tumblers, while Naveda '127 discloses but a single mechanism devoid of any secondary locking feature; consequently, the proposed combination of art can not be interpreted as teaching Appellant's "elongate member" that provides "simultaneously engagement of said cylinder and said plug" in combination with

“electrical operator” that is disposed to maintain “said simultaneously engagement” provided by the elongate member. Neither the solenoid 36 and pin 38 of the primary reference nor the coil 17 of the secondary reference may be said to maintain Appellant’s simultaneously engagement provided by the elongate member between the cylinder and the plug. There is no *prima facie* showing of obviousness. It is this cooperation between the elements of Appellant’s structure that has resulted in a compound mechanism that is both compact and reliable with the electrical operator reinforcing the locking provided by the apparatus. In view of these and other distinctions, as well as the noted advantages flowing from those distinctions, the Examiner’s proposed combination improperly fails to consider the “subject matter as a whole” and is required by 35 U.S.C. §103, and the rejection must be withdrawn.

As was earlier noted, both the primary and secondary references rely upon bitted keys and the corresponding pin tumblers to provide their primary locking functions. As was also earlier noted, with the exception of Naveda ‘127 which has but a single locking mechanism, both of those primary locking functions are structurally independent of the “secondary locking ‘high security’ mechanical features” (see Gokcebay ‘777, col. 6, lines 55, 56). The Examiner’s comments under 37 C.F.R. §1.104(c)(2) tend to become rambling and fail to clearly designate “the particular part relied on” in the three references that form the proposed combination. To the extent that the Examiner proposes to place the moving coil 17 and armature 18 of Thordmark ‘274 into the plug of Gokcebay ‘777 in accordance with an obscure and unidentified teaching of Naveda ‘127, moving coil 71 and armature 18 will surely displace the “conventional pin tumbler mechanical bittings” of Gokcebay (see Gokcebay ‘777, col. 6, line 62) from the

cylinder plug and concomitantly, impermissibly destroy the ability of the primary reference to rely upon those “conventional pin tumbler mechanical bittings” as the primary locking mechanical feature; this is an improper combination under 35 U.S.C. §103 and may not be relied upon to support an obviousness rejection.

To the extent that the Examiner intends to have moveable coil 17 and blocking element 11 of Thordmark '274 in a radial orientation in the proposed combination, that configuration will simply replace solenoid 36 and blocking pin 38 of the primary reference because moveable coil 17 and blocking element 11 travel together. Moreover, blocking element 11 has no useful function in such a configuration. Furthermore, this configuration will still not meet the several features of claims 14 and 43 that are noted in the foregoing paragraphs, and the Examiner's reliance upon Naveda '127 will not remedy these deficiencies.

**Claims 25, 26, 28, 30 through 33, 39 through 42, 46 through 52, 54, 56, 64, 70, 76, 77, 90, 91, 105, 108, 109, 111, 113 through 116, 119, 120**

The rejection of claims 25, 26, 28, 30 through 33, 39 through 42, 46 through 52, 54, 56, 64, 70, 76, 77, 90, 91, 105, 108, 109, 111, 113 through 116, 119, 120 as rendered obvious, and unpatentable over the Examiner's proposed combination is unsustainable on the record before the Examiner.

**First**, the combination proposed by the Examiner would impermissibly destroy the ability of the primary reference to operate in its intended mode of operation. Gokcebay '777 expressly teaches a radially oriented solenoid 36 and blocking pin 38, together with the pin tumbler relied

upon by the Examiner.<sup>64</sup> The alternative embodiment illustrated by Figure 7 of Thordmark '274 that is relied upon by the Examiner includes side tumblers 5 and side bar 7 mounted in the cylinder plug 3, while the coil 17 and the blocking element 11 are mounted within the shell rather than within the cylinder plug. Gokcebay '777 however, expressly teaches in col. 3, beginning with line 2, that all of electronics and hardware are “contained in the cylinder plug”, and that nothing is “required outside of the lock cylinder” aside

“from a small recess or bore which is provided in the cylinder shell.”

This is a critical distinction because the combination proposed by the Examiner relies upon the hardware and electronics of Thordmark '274 that are necessarily housed within the shell, rather than within the cylinder plug as required by the primary reference. Moreover, that combination eliminates the small recess or bore of the primary reference, which the primary reference relies upon to assure a positive locking by allowing “for secondary locking high security mechanical features, generally located in side of the cylinder plug.” See Gokcebay '777 at col. 6, beginning with 55. Consequently, the Examiner’s proposed combination fails to provide Appellant’s “electronically powered drive mechanism located within the barrel *and cooperating with* the electromechanical locking member to selectively move the locking member from the barrel blocking position ... .” In short, both the simplicity and the secondary locking of the primary reference are removed by the Examiner’s proposed combination.

**Second**, it is unclear whether the Examiner’s proposed combination relies upon the pin

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<sup>64</sup> Gokcebay '777, column 6, lines 61 and 62.

tumblers (not shown, col. 6, lines 61-62) of Gokcebay '777 or the "latching element 10" of Thordmark '274, to meet Appellant's pending claims. An analysis of the Examiner's proposed combination incorporating the pin tumblers (not shown, col. 6, lines 61-62) of Gokcebay '777 is discussed in the preceding paragraph. To the extent that the Examiner incorporates the "latching element 10" of Thordmark '274 to meet the language of Appellant's pending claims, there are two structural impediments which make the Examiner's proposed combination untenable. First, claim 90 defines a structure with "a side bar ... [and] an electronically powered drive mechanism located within the barrel *and cooperating with* the electromechanical locking member to selectively move the locking member from the barrel blocking position to the non-barrel blocking position in which the side bar moves out of the cavity ..." and "an electromechanical locking member disposed within the barrel member ... positionable to permit the side bar to engage the locking member in a non-barrel blocking position..." In contradistinction, in the Examiner's proposed combination, coil 17, blocking element 11 and latching element 10 of Thordmark '274 must reside in the cylinder shell in order to accommodate the existence of the top tumblers and side tumblers 5 for top code 4a and side code 4b that, as shown by Figs. 1 and 2, extend over substantially the entire axial length of plug 3. Second, coil 17, blocking element 11 and latching element 10 of Thordmark '274 are mounted within an axial recess. Wholly absent from the art relied upon by the Examiner to make this proposed combination is any teaching or suggestion of how to alter the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark '274 (that form the "secondary locking high security mechanical features" required by Gokcebay '777) to fit within the mass of plug 3

without displacing the combination of the keyway and the primary locking mechanism (formed by the top tumblers and side tumblers 5 for top code 4a and side code 4b). Appellant submits that any miniaturization of the “secondary locking high security mechanical features” that may be required by Gokcebay ‘777 in order to fit within the mass of plug 3 would necessarily diminish the ability of latching element 10 to resist “shear forces at the interface between plug and lock cylinder.”<sup>65</sup> This miniaturization of the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274 in order to mount these components within the plug of Gokcebay ‘777 essentially reduces latching element 10 to nothing more than “a latching pin.” This is hardly an enhancement of security as is asserted by the Examiner. It should be noted however, that the Examiner’s proposed combination incorporating Thordmark ‘274 expressly warns that such structures as “latching pins or like devices will fracture even when only a relatively moderate force is used on the lock, therewith enabling the lock to be opened.”<sup>66</sup> In short, the Examiner’s proposed combination is a deliberate and improper weakening of the “high security” demanded by Gokcebay ‘777 of such secondary locking mechanical features.<sup>67</sup>

The suggestions of Naveda ‘127 about the “size or geometric shape” of a key,<sup>68</sup> and the presence of an “electromagnet” that is “located in the receiver or alternatively in the body of the

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<sup>65</sup> See Thordmark ‘274, at column 2, lines 54-57.

<sup>66</sup> Thordmark ‘274, col. 2, lines 57-61.

<sup>67</sup> See Gokcebay ‘777, at column 6, lines 55-56.

<sup>68</sup> Naveda ‘127, the “size or geometric shape” of a key (col. 4, line 60).

key”,<sup>69</sup> are immaterial to these issues raised by the Examiner’s miniaturization of the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274 in order to mount these components within the plug of Gokcebay ‘777 because Naveda ‘127 teaches nothing about Appellant’s barrel member. Moreover, the “electromagnetic 36” of Naveda ‘127 is structurally and functionally different from Appellant’s “electronically powered drive mechanism.” Incorporation of “electromagnetic 36”, which is not small in size, into the plug of Gokcebay ‘777 will remedy none of the deficiencies in the Examiner’s proposed combination noted earlier in this response.

In view of the fact that both the primary and secondary references teach away from such diminution of security, and nothing in Naveda ‘127 neither teaches nor suggests how to accommodate the presence of both the combination of the keyway 26 (of Gokcebay ‘777) and the primary locking mechanism (formed for example, by the top tumblers and side tumblers 5 for top code 4a and side code 4b) and the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274. In contradistinction, Appellant’s structure alone allows for a sidebar that may be axially extended over the entire length of the junction between the shell and the cylinder plug, a structure that, unlike the Examiner’s proposed miniaturization, is better able to resist “shear forces at the interface between plug and lock cylinder.” See Thordmark ‘274, at column 2, lines 54-57. Moreover, the Examiner’s proposed combination makes no provision for either “side bar cooperating between the shell and the barrel ... wherein at least one

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<sup>69</sup> Naveda ‘127, column 9, lines 22-25.

electromechanical locking member is disposed within the barrel and is positionable in a barrel blocking position” as defined by claim 85 or the “locking member including a groove” that is “disposed within the recess of the barrel member” defined by Appellant’s claim 89.

In short, formation of the axial recess in cylinder plug 24 of Gokcebay ‘777 necessary to accommodate the configuration of the secondary locking mechanism of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274 would essentially cleave plug 24 in two, with the T-shaped element 20 on one side of the cleave and latching element 10 protruding from the other side of that cleave, while any miniaturization of the secondary locking mechanism would be contrary to the express teachings of Thordmark ‘274 and would diminish the security which both Gokcebay ‘777 and Thordmark ‘274 teach; under 35 U.S.C. §103 the Examiner can not alone modify the structures taught by the primary and secondary references in a manner that would defeat the expressly articulated goal of those references. These deficiencies in the Examiner’s proposed combination, together with the enhancement of the security provided thereby, are evidence of the non-obviousness of the lock defined by the structure of claims 85 through 89. Reversal of this rejection is therefore required.

There is simply neither basis nor motivation for making the combination proposed by the Examiner except as an impermissible hindsight reconstruction of the art in the light provided only by Appellant’s claims. Thordmark ‘247 expressly denigrates the use of “radially directed elements” such as that taught by Gokcebay ‘777,<sup>70</sup> and expressly states that his structure “is to

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<sup>70</sup> See Thordmark ‘274, col. 2, lines 50-60.



eliminate the aforesaid drawbacks” (see Thordmark ‘274, col. 2, lines 64-65) that are attendant upon those “radially directed elements” while Naveda ‘127 is completely silent on the efficacy of structures such as those taught by the primary reference. Neither the express limitations of Appellant’s claims nor this express denigration of the Examiner’s proposed combination may be ignored in a determination of obviousness *vel non* because this denigration by the secondary reference expressly negates the requisite motivation necessary to make the Examiner’s proposed combination under 35 U.S.C. §103. Accordingly, the rejection is improper and can not stand.

**Claims 47, 48 and 51**

Dependent claims 47, 48 and 51, further define the structure of parent claim 46, albeit in terms of the operator. Contrary to the Examiner’s assertions, neither Naveda ‘127 nor Thordmark ‘274 nor Gockebay ‘777 advocates both insertion of an electrical operator into the cylinder plug and some interaction between that plug borne operator and a bar, elongated member or sidebar that is able to make simultaneous engagement of both the shell and cylinder plug, because:

- Gockebay ‘777 teaches only insertion of a solenoid within the cylinder,
- Gockebay ‘777 is wholly devoid of any bar (other than the armature 18 that is itself a part of solenoid 17),
- Gockebay ‘777 is wholly devoid of any bar that provides any type of engagement between the shell and cylinder,
- Thordmark ‘274 teaches nothing about insertion of any operator within the cylinder,

- both Gockebay '777 and Thordmark '274 require not only complete replacement of the cylinder, but major alteration of the shell in order to accommodate a retrofit,

- both Gockebay '777 and Thordmark '274 are utterly incapable of providing any interaction with their primary locking mechanical features, and

- Naveda '127 is singularly devoid of any teaching of a cylinder plug and discloses no primary mechanical locking mechanism as is required by both Gockebay '777 and Thordmark '274,

- Naveda '127 fails to describe how traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777.

In contradistinction, Appellant's claims define a structure with an electrical operator borne by the cylinder plug, a member moving in response to the operator, and interaction between the operator and a bar interposed between the shell and the cylinder plug. The fact that the art is singularly and uniformly silent on this small advance may not be ignored in any determination of the obviousness *vel non* based upon "the differences between the subject matter sought to be patented and the prior art ...".<sup>71</sup>

#### **Claim 49**

Unlike the structures found in the Examiner's proposed combination with separate and independent mechanical and electromagnetic locking mechanisms, claim 49 defines a structure

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<sup>71</sup> 35 U.S.C. §103(a).

with an integration of the structure as well as the operation of “obstructing movement” of the cylinder plug relative to the shell, a feature neither taught nor illustrated by the Examiner’s proposed combination. Consequently, the administrative record fails to provide a *prima facie* showing of obviousness.

**Claim 56**

Claim 56 was rejected under 35 U.S.C. §103(a) as rendered obvious by proposed combination of Gokcebay '777 modified according to the Thordmark U.S. 5,542,274 in view of Naveda U.S. 4,416,127. Appellant respectfully traverses this rejection for the following reasons.

The lock defined by claim 56 has “an elongate member interposed between said shell and said plug to travel generally along a radial direction” in combination with “an electrical operator responding to said control signal by moving in a second direction not aligned with said radial direction ... obstructing said travel ... .” Wholly absent from the Examiner’s proposed combination is any teaching of how an electrical operator formed by moveble coil 17 and blocking element 11 of Thordmark ‘274 could be made to travel in any direction that is not aligned with said radial direction.” Moreover, the Examiner’s comments have neglected to explain how movement in different planes could be obtained by the proposed combination; in fact, all movement in the proposed combination exists only within the same plane. Accordingly, there is no *prima facie* showing of obviousness, and claim 56 is readily patentably distinguishable over the prior art.

**Claims 64, 65, 70, 75, 76 and 77**

Independent claims 64, 65, 70, 75, 76 and 77 were rejected under 35 U.S.C. §103(a) as rendered obvious by proposed combination of Gokcebay '777 modified according to the Thordmark U.S. 5,542,274 in view of Naveda U.S. 4,416,127. Appellant respectfully traverses this rejection for the following reasons.

**First**, the lock defined by claim 64 uses “a bar interposed between said shell and said cylinder plug to travel generally along a radial plane” in combination with “an electrical operator borne by said cylinder plug and rotatable with said plug, said electrical operator being electrically operable to respond to said control signal by moving independently of said travel by said bar, between one of a first orientation providing obstruction of said travel and a second and different orientation accommodating *said travel ...*.” As defined by claim 65, Appellant’s lock uses “a bar interposed between said shell and said cylinder plug to travel generally along a radial plane” in combination with “an electrical operator borne by said cylinder plug and rotatable with said plug, said electrical operator being electrically operable to respond to said control signal by moving in a second direction not aligned with said radial direction ... obstructing *said travel ...*.” Claim 70 uses “a bar interposed between said shell and said cylinder plug to travel generally along a radial plane” in combination with “an electrical operator borne by said cylinder plug and rotatable with said plug, said electrical operator being electrically operable to respond to said control signal by moving along a geometric construct other than to said radial plane between one of a first orientation providing obstruction of said travel and a second and different orientation accommodating *said travel ...*.” Claim 75 uses “a bar interposed between said shell and said

cylinder plug to travel generally along a radial plane” in combination with “an electrical operator borne by said cylinder plug and rotatable with said plug, said electrical operator being electrically operable to respond to said control signal by moving along a radial axis that is transverse to said radial plane between a first orientation providing obstruction of said travel and a second and different orientation accommodating said travel ... .” Claim 76 uses “an elongate bar exhibiting a greatest longitudinal dimension along a second axis that extends transversely to said first base and to said second base, said bar being interposed between said shell and said cylinder plug to travel generally along a radial axis that is transverse to said second axis ... “ in combination with “an electrical operator borne by said cylinder plug and rotatable with said plug, said electrical operator being electrically operable to respond to said control signal by moving along said radial axis between one of a first orientation providing obstruction of *said travel* and a second and different orientation accommodating *said travel* ... .” Claim 77 however, uses “an elongate bar exhibiting a greatest longitudinal dimension along a second axis that extends transversely to said first base and to said second base, said bar being interposed between said shell and said cylinder plug to travel generally along a radial axis that is radial to said cylinder plug and transverse to said second axis, between a first position engaging both said shell and said plug while obstructing rotation of said cylinder plug within said recess ...” together with “an electrical operator borne by said cylinder plug and rotatable with said plug ... to respond to a control signal by moving between one of a first orientation providing obstruction of *said travel* ... .” Not only does the Examiner’s proposed combination fail to meet these varied express geometric definitions, but Appellant’s interaction between an electrical operator borne by and rotatable with

the cylinder plug and the travel of the bar interposed between the shell and the cylinder plug is not found in the prior art, either taken as individual references or in the combination proposed by the Examiner simply because all of the references relied upon by the Examiner uniformly restrict movement to within a single plane. The substitution of moveble coil 17, blocking element 11 and latching element 10 of Thordmark '274 for solenoid 36 and blocking pin 38 of Gokcebay '777 necessary to construct the Examiner's proposed combination will prevent the proposed combination from achieving Appellant's travel and orientation. Consequently, the Examiner has failed to make a *prima facie* showing of obviousness. It is this difference in geometric movement, together with the defined inter-cooperation that advantageously endow Appellant's embodiments with the enhanced security of the locking function that is available with neither the primary or either of the two secondary references. Independent claims 64, 65, 70, 75 and 76 are therefore patentably distinguishable, and allowable under 35 U.S.C. §103(a).

**Second**, the sole motivation provided in the art for the combination proposed by the Examiner is an impermissible reconstruction of the art in the light provided by Appellant alone. This, by itself, is convincing indicia of the patentability of claims 64, 65, 70, 75 and 76 under 35 U.S.C. §103.

**Third**, ostensibly the prior art relied upon by the Examiner endeavors to provide a lock that may be easily retrofitted. Gokcebay '777 however, requires that a bore 50 be drilled within the shell of the existing lock while Thordmark '274 requires that a separate V-shaped groove 3c that is spaced-apart and distinct from the slot for sidebar 7, be machined within the cylinder, and that the entire recess shown in Figure 1 be machined into the shell. Contrary to the Examiner's

assertions, neither Naveda '127 nor Thordmark '274 nor Gockebay '777 advocates both insertion of an electrical operator into the cylinder plug and some interaction between that plug borne operator and a bar, elongated member or sidebar that is able to make simultaneous engagement of both the shell and cylinder plug, because:

- Gockebay '777 teaches only insertion of a solenoid within the cylinder,
- Gockebay '777 is wholly devoid of any bar (other than the armature 18 that is itself a part of solenoid 17),
- Gockebay '777 is wholly devoid of any bar that provides any type of engagement between the shell and cylinder,
- Thordmark '274 teaches nothing about insertion of any operator within the cylinder,
- both Gockebay '777 and Thordmark '274 require not only complete replacement of the cylinder, but major alteration of the shell in order to accommodate a retrofit,
- both Gockebay '777 and Thordmark '274 are utterly incapable of providing any interaction with their primary locking mechanical features, and
- Naveda '127 is singularly devoid of any teaching of a cylinder plug and discloses no primary mechanical locking mechanism as is required by both Gockebay '777 and Thordmark '274,
- Naveda '127 fails to describe how traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777.

In contradistinction, Appellant's claims define a structure with an electrical operator borne by the cylinder plug, a member moving in response to the operator, and interaction between the

operator and a bar, elongate member or sidebar interposed between the shell and the cylinder plug. Although these differences may appear to be but a small advance in the art, the advantages flowing from these differences are substantial. For example, only Appellant's claims define a structure with an electronic operator borne by the cylinder plug that interacts with a sidebar, elongate member or bar, and that consequently, is able to advantageously both retrofit an installed lock by the expedient of replacing only the cylinder plug *without any* alteration of the shell and to *interact or cooperate with* an existing sidebar of a primary mechanical locking mechanism that is positioned between the shell and plug. The fact that both Gockebay '777 and Thordmark '274 are concerned with retrofitting of existing locks, a fact noted by the Examiner, and that both references require modification of the shell of the lock in order to complete that retrofitting, while Appellant alone provides a cylinder plug that may work with an existing sidebar and may be retrofit without any modification of the shell is a difference between the prior art and the structure defined by the pending claims that prevents the subject matter as a whole from being obviousness under 35 U.S.C. §103. This deficiency in the Examiner's proposed combination is not remedied by Naveda '127. Moreover, this deficiency is highlighted by the fact that Thordmark '274 clearly avoids either teaching or suggestion of any interaction or cooperation between sidebar 7 and coil 17.

This interaction with the existing sidebar beneficially enhances the security provided by Appellant's lock. Neither Gockebay '777, Thordmark '274 nor Naveda '127, nor the Examiner's proposed combination of Gockebay '777, Thordmark '274 and Naveda '127 are able to provide these advantages. Moreover, the Examiner's proposed combination is incomplete



and fails to make a *prima facie* showing of obviousness; how, for example, is the traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777? No details of such a combination are provided by the Examiner's proposed combination. Accordingly, in view of these differences between the pending claims and the prior art, "the subject matter as a whole" can not be found to be rendered obvious under 35 U.S.C. §103. In short, the Examiner has unfairly sought to limit the scope of coverage to which Appellant is entitled by reconstructing the art in an effort to meet the terms of Appellant's claims when none of that art suggests such a simple modification of the art as Appellant's electrical operator being both borne by and rotating with the cylinder plug *and* operating to block the travel of a sidebar. Accordingly, reversal of this rejection is required.

#### **Claim 90**

Independent claims 90, which Appellant copied from claim 19 of the Field U.S. Patent No. 5,839,307, was rejected under 35 U.S.C. §103(a) as rendered obvious by proposed combination of Gokcebay '777 modified according to the Thordmark U.S. 5,542,274 in view of Naveda U.S. 4,416,127. Appellant respectfully traverses this rejection for the following reasons.

**First**, Appellant notes that the Examiner improperly asserted that independent claim 90, copied from claim 19 of Field '307 patent, was withdrawn from consideration, even though claim 90 defines the salient features of Appellant's elected species. Moreover, the field of search is co-extensive with the elected species. Consideration of claim 90 is therefore required.

**Second**, the combination proposed by the Examiner would impermissibly destroy the

ability of the primary reference to operate in its intended mode of operation. Gokcebay '777 expressly teaches a radially oriented solenoid 36 and blocking pin 38, together with the pin tumbler relied upon by the Examiner, mentioned in col. 6, lines 61 and 62. The alternative embodiment illustrated by Figure 7 of Thordmark '274 that is relied upon by the Examiner includes side tumblers 5 and side bar 7 mounted in the cylinder plug 3, while the coil 17 and the blocking element 11 are mounted within the shell rather than within the cylinder plug. Gokcebay '777 however, expressly teaches in col. 3, beginning with line 2, that all of electronics and hardware are “contained in the cylinder plug”, and that nothing is “required outside of the lock cylinder” aside “from a small recess or bore which is provided in the cylinder shell.” The combination proposed by the Examiner relies upon the hardware and electronics of Thordmark '274 that are necessarily housed within the shell, rather than within the cylinder plug as required by the primary reference. Moreover, that combination eliminates the small recess or bore of the primary reference, which the primary reference relies upon to assure a positive locking by allowing “for secondary locking high security mechanical features, generally located in side of the cylinder plug.” See Gokcebay '777 at col. 6, beginning with 55. Consequently, the Examiner’s proposed combination fails to provide Appellant’s “electronically powered drive mechanism located within the barrel *and cooperating with* the electromechanical locking member to selectively move the locking member from the barrel blocking position ... .” In short, both the simplicity and the secondary locking of the primary reference are removed by the Examiner’s proposed combination.

**Third**, it is unclear whether the Examiner’s proposed combination relies upon the pin

tumblers (not shown, col. 6, lines 61-62) of Gokcebay '777 or the "latching element 10" of Thordmark '274, to meet Appellant's pending claims. An analysis of the Examiner's proposed combination incorporating the pin tumblers (not shown, col. 6, lines 61-62) of Gokcebay '777 is discussed in the preceding paragraph. To the extent that the Examiner incorporates the "latching element 10" of Thordmark '274 to meet the language of Appellant's pending claims, there are two structural impediments which make the Examiner's proposed combination untenable. First, claim 90 defines a structure with "a side bar ... [and] an electronically powered drive mechanism located within the barrel *and cooperating with* the electromechanical locking member to selectively move the locking member from the barrel blocking position to the non-barrel blocking position in which the side bar moves out of the cavity ..." and "an electromechanical locking member disposed within the barrel member ... positionable to permit the side bar to engage the locking member in a non-barrel blocking position..." In contradistinction, in the Examiner's proposed combination, coil 17, blocking element 11 and latching element 10 of Thordmark '274 must reside in the cylinder shell in order to accommodate the existence of the top tumblers and side tumblers 5 for top code 4a and side code 4b that, as shown by Figs. 1 and 2, extend over substantially the entire axial length of plug 3. Second, coil 17, blocking element 11 and latching element 10 of Thordmark '274 are mounted within an axial recess. Wholly absent from the art relied upon by the Examiner to make this proposed combination is any teaching or suggestion of how to alter the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark '274 (that form the "secondary locking high security mechanical features" required by Gokcebay '777) to fit within the mass of plug 3

without displacing the combination of the keyway and the primary locking mechanism (formed by the top tumblers and side tumblers 5 for top code 4a and side code 4b). Appellant submits that any miniaturization of the “secondary locking high security mechanical features” that may be required by Gokcebay ‘777 in order to fit within the mass of plug 3 would necessarily diminish the ability of latching element 10 to resist “shear forces at the interface between plug and lock cylinder.”<sup>72</sup> This miniaturization of the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274 in order to mount these components within the plug of Gokcebay ‘777 essentially reduces latching element 10 to nothing more than “a latching pin.” This is hardly an enhancement of security as is asserted by the Examiner. It should be noted however, that the Examiner’s proposed combination incorporating Thordmark ‘274 expressly warns that such structures as “latching pins or like devices will fracture even when only a relatively moderate force is used on the lock, therewith enabling the lock to be opened.”<sup>73</sup> In short, the Examiner’s proposed combination is a deliberate and improper weakening of the “high security” demanded by Gokcebay ‘777 of such secondary locking mechanical features.<sup>74</sup>

The suggestions of Naveda ‘127 about the “size or geometric shape” of a key,<sup>75</sup> and the presence of an “electromagnet” that is “located in the receiver or alternatively in the body of the

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<sup>72</sup> See Thordmark ‘274, at column 2, lines 54-57.

<sup>73</sup> Thordmark ‘274, col. 2, lines 57-61.

<sup>74</sup> See Gokcebay ‘777, at column 6, lines 55-56.

<sup>75</sup> Naveda ‘127, the “size or geometric shape” of a key (col. 4, line 60).

key”,<sup>76</sup> are immaterial to these issues raised by the Examiner’s miniaturization of the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274 in order to mount these components within the plug of Gokcebay ‘777 because Naveda ‘127 teaches nothing about Appellant’s barrel member. Moreover, the “electromagnetic 36” of Naveda ‘127 is structurally and functionally different from Appellant’s “electronically powered drive mechanism.” Incorporation of “electromagnetic 36”, which is not small in size, into the plug of Gokcebay ‘777 will remedy none of the deficiencies in the Examiner’s proposed combination noted earlier in this response.

In view of the fact that both the primary and secondary references teach away from such diminution of security, and nothing in Naveda ‘127 neither teaches nor suggests how to accommodate the presence of both the combination of the keyway 26 (of Gokcebay ‘777) and the primary locking mechanism (formed for example, by the top tumblers and side tumblers 5 for top code 4a and side code 4b) and the configuration of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274. In contradistinction, Appellant’s structure alone allows for a sidebar that may be axially extended over the entire length of the junction between the shell and the cylinder plug, a structure that, unlike the Examiner’s proposed miniaturization, is better able to resist “shear forces at the interface between plug and lock cylinder.” See Thordmark ‘274, at column 2, lines 54-57. Moreover, the Examiner’s proposed combination makes no provision for either “side bar cooperating between the shell and the barrel ... wherein at least one

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<sup>76</sup> Naveda ‘127, column 9, lines 22-25.

electromechanical locking member is disposed within the barrel and is positionable in a barrel blocking position” as defined by claim 85 or the “locking member including a groove” that is “disposed within the recess of the barrel member” defined by Appellant’s claim 89.

In short, formation of the axial recess in cylinder plug 24 of Gokcebay ‘777 necessary to accommodate the configuration of the secondary locking mechanism of coil 17, blocking element 11 and latching element 10 of Thordmark ‘274 would essentially cleave plug 24 in two, with the T-shaped element 20 on one side of the cleave and latching element 10 protruding from the other side of that cleave, while any miniaturization of the secondary locking mechanism would be contrary to the express teachings of Thordmark ‘274 and would diminish the security which both Gokcebay ‘777 and Thordmark ‘274 teach; under 35 U.S.C. §103 the Examiner can not alone modify the structures taught by the primary and secondary references in a manner that would defeat the expressly articulated goal of those references. These deficiencies in the Examiner’s proposed combination, together with the enhancement of the security provided thereby, are evidence of the non-obviousness of the lock defined by the structure of claim 90. Reversal of this rejection is therefore required.

#### **Claim 90**

Independent process claims 90 defines a process of “retrofitting a mechanical cylinder lock to form an electromechanical cylinder lock”. The Examiner’s proposed combination requires a “recess or bore 50” in order to meet the express teachings of the primary reference, namely that:

“this bore, recess or groove 50 is the only modification *required* in the entire lock ... the bore or recess 50 is *easily formed* by drilling a hole through the cylinder shell or forming an internal recess or groove on the inside surface of the cylinder shell” <sup>77</sup>

Appellant’s process neither uses nor requires a modification of the shell to accommodate the process of rejected claim 90. Recognizing that the Examiner’s modification of the primary reference in a manner which prevents the operation of the primary reference in its intended mode, is impermissible, not only is there no evidence of motivation in the record to support the Examiner’s proposed process, but the fact that Appellant’s process advantageously eliminates this awkward step of first removing, and then drilling the cylinder shell, if further evidence of non-obviousness of the processes of claim 90. Given this evidence, and the advantageous results flowing therefrom, claim 90 is allowable over the prior art.

#### **Claim 91**

Claim 91 was rejected under 35 U.S.C. §103(a) as rendered obvious by the proposed combination of Gokcebay '777 modified according to the Thordmark U.S. 5,542,274 in view of Naveda U.S. 4,416,127. Appellant respectfully traverses this rejection for the following reasons.

**First**, the lock defined by claim 91 uses “a bar interposed between said shell and said cylinder plug to reciprocate generally along a radial plane” in combination with “an electrical operator borne by said cylinder plug and rotatable with said plug, said electrical operator being

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<sup>77</sup> Gockebay '777, column 46 - 51; column 6, lines 45 and 46 states that “ Fig 3, show[s] a bore or recess 50 into which the blocking pin 38 extends in the blocking position.”

electrically operable to respond to said control signal by moving independently of said bar between a first orientation providing obstruction of *said reciprocation* by said bar and a second and different orientation removing said obstruction.” The sole motivation provided in the art for the combination proposed by the Examiner is an impermissible reconstruction of the art in the light provided by Appellant alone. This, by itself, is convincing indicia of the patentability of claims 64, 65, 70, 75 and 76 under 35 U.S.C. §103.

**Second**, ostensibly, all of the art relied upon by the Examiner endeavors to provide a lock that may be easily retrofitted. Gokcebay ‘777 however, requires that a bore 50 be drilled within the shell of the existing lock while Thordmark ‘274 requires that a separate V-shaped groove 3c that is spaced-apart and distinct from the slot for sidebar 7, be machined within the cylinder, and that the entire recess shown in Figure 1 be machined into the shell. Contrary to the Examiner’s assertions, neither Naveda ‘127 nor Thordmark ‘274 nor Gockebay ‘777 advocates both insertion of an electrical operator into the cylinder plug and some interaction between that plug borne operator and a bar, elongated member or sidebar that is able to make simultaneous engagement of both the shell and cylinder plug, because:

- Gockebay ‘777 teaches only insertion of a solenoid within the cylinder,
- Gockebay ‘777 is wholly devoid of any bar (other than the armature 18 that is itself a part of solenoid 17),
- Gockebay ‘777 is wholly devoid of any bar that provides any type of engagement between the shell and cylinder,
- Thordmark ‘274 teaches nothing about insertion of any operator within the cylinder,



- both Gockebay '777 and Thordmark '274 require not only complete replacement of the cylinder, but major alteration of the shell in order to accommodate a retrofit,

- both Gockebay '777 and Thordmark '274 are utterly incapable of providing any interaction with their primary locking mechanical features, and

- Naveda '127 is singularly devoid of any teaching of a cylinder plug and discloses no primary mechanical locking mechanism as is required by both Gockebay '777 and Thordmark '274,

- Naveda '127 fails to describe how traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777.

In contradistinction, Appellant's claims define a structure with an electrical operator borne by the cylinder plug, a member moving in response to the operator, and interaction between the operator and a bar, elongate member or sidebar interposed between the shell and the cylinder plug. Although these differences may appear to be but a small advance in the art, the advantages flowing from these differences are substantial. For example, only Appellant's claims define a structure with an electronic operator borne by the cylinder plug that interacts with a sidebar, elongate member or bar, and that consequently, is able to advantageously both retrofit an installed lock by the expedient of replacing only the cylinder plug *without any* alteration of the shell and to *interact or cooperate with* an existing sidebar of a primary mechanical locking mechanism that is positioned between the shell and plug. The fact that both Gockebay '777 and Thordmark '274 are concerned with retrofitting of existing locks, a fact noted by the Examiner, and that both references require modification of the shell of the lock in order to complete that

retrofitting, while Appellant alone provides a cylinder plug that may work with an existing sidebar and may be retrofit without any modification of the shell is a difference between the prior art and the structure defined by the pending claims that prevents the subject matter as a whole from being obviousness under 35 U.S.C. §103. This deficiency in the Examiner's proposed combination is not remedied by Naveda '127. Moreover, this deficiency is highlighted by the fact that Thordmark '274 clearly avoids either teaching or suggestion of any interaction or cooperation between sidebar 7 and coil 17.

This interaction with an existing sidebar beneficially enhances the security provided by Appellant's lock. Neither Gockebay '777, Thordmark '274 nor Naveda '127, nor the Examiner's proposed combination of Gockebay '777, Thordmark '274 and Naveda '127 are able to provide these advantages. Moreover, the Examiner's proposed combination is incomplete and fails to make a *prima facie* showing of obviousness; how, for example, is the traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777? No details of such a combination are provided by the Examiner's proposed combination. Accordingly, in view of these differences between the pending claims and the prior art, "the subject matter as a whole" can not be found to be rendered obvious under 35 U.S.C. §103. In short, the Examiner has unfairly sought to limit the scope of coverage to which Appellant is entitled by reconstructing the art in an effort to meet the terms of Appellant's claims when none of that art suggests such a simple modification of the art as Appellant's electrical operator being both borne by and rotating with the cylinder plug *and* operating to block the travel of a sidebar. Accordingly, reversal of this rejection is required.

**Claim 95**

Claim 95 was rejected under 35 U.S.C. §103(a) as rendered obvious by the same proposed combination of Gokcebay '777 and Thordmark '274 . Appellant respectfully traverses this rejection for all the reasons set forth in the foregoing paragraphs.

Additionally, Appellant notes that the Examiner's proposed combination is devoid of such as further patentably distinguishing features as Appellant's "locking mechanism" that is "interposed between said cylinder plug and said bar." The absence of a *prima facie* showing of obviousness characterizing the administrative record before the Examiner may be best exhibited by a careful examination of both the references that the Examiner has repeatedly misrepresented in the examination. Neither those references may be said by the Examiner to accomplish in combination, what neither accomplishes alone. Even if by some rogue interpretation of §103 unsupported by either by the Commissioner or 35 U.S.C. §103 the Examiner is able to provide the Appellant's electrical operator bore by the cylinder plug, the Examiner is not able to demonstrate a locking mechanism that is "interposed between said cylinder plug and said plug." Appellant questions which noun in the phrase "locking mechanism" is not understood. This clear definition of cooperation between the several elements of Appellant's claim 95 provides both primary and secondary security, in the manner neither in vision nor suggested by the Examiner's proposed combination. Accordingly, claim 95 is separately patentably distinguishable and allowable. Reversal of the rejection is required.

**Claim 105**

Claim 105 defines a geometric construct between orientation of a side bar travel and a movement of a locking member. In the Examiner's proposed combination including the two secondary references, this construct can not be met, evidence of a lack of a *prima facie* showing of obviousness. Moreover, incorporation of this construct into the primary reference would impermissibly prevent its solenoid from engaging the shell, thereby defeating its independent locking movement, further evidence of non-obviousness. This rejection should not be sustained.

**Claims 108, 109, 111 And 113 Through 116**

Dependent claims 108, 109, 111 and 113 through 116 were rejected under 35 U.S.C. §103(a) as rendered obvious by the proposed combination of Gokcebay '777 modified according to the Thordmark U.S. 5,542,274 in view of Naveda U.S. 4,416,127. These claims require a bar, or sidebar, "engaging both said shell and said cylinder plug during said rotation." In contradistinction, the Examiner's proposed combination modifies the single solenoid of the primary reference with an unknown structure, that necessarily requires a bar, or sidebar, wholly external to the cylinder plug, and which can not engage both the shell and cylinder plug during rotation. Moreover, in the proposed combination including Naveda '127, as in Thordmark '272, all moving parts, including bars, or sidebars, are wholly external to the cylinder plug. The record before the Examiner is utterly devoid of evidence providing motivation for interposing any of these moving parts between the shell and cylinder plug during rotation; in point of fact, the movable parts of Naveda '127 (which teaches a "bolt" type lock, as opposed to a cylinder lock) such as pinion 37, spring 38 and pinion 40, are located in the casemate of the lock, wholly

divorce from the key and keyway which would normally characterize a cylinder lock. Which of those parts of Naveda '127 would have utility when incorporated into the primary reference is unknown. Equally lacking in Naveda '127, as in Thordmark '272, is motivation for incorporating any of its parts between the cylinder plug and shell during rotation; the primary reference does not benefit from such a modification. Appellant alone, unlike either the primary reference and unlike Naveda '127 and Thordmark '272, teaches interposition of a bar, or sidebar, which may be advantageously employed in cooperation with a separate locking mechanism. Both the primary reference and Thordmark '272 teaching auxiliary locking mechanism that are wholly divorced and physically separate from their mechanical locking mechanisms.<sup>78</sup> Consequently, there is no basis for such a modification of the primary reference except an impermissible hindsight reconstruction of the art in the light provided by Appellant alone. The Examiner is therefore, respectfully requested to refuse to sustain this rejection.

### **Claims 119 And 120**

Appellant notes that claim 119 is a copy of claim 1 of Field '307, and that claim 120 is a copy of claim 14 of the Field '307 patent. The several components have been previously identified in the Appellant's earlier filed responses. Appellant further notes that dependent claim 119 is directed to the language on lines 7-18 of column 9, it is copied from claim 1 of Field '307 patent. Consequently, claims 119 and 120 are identical to claims 1 and 14 of Field '307 patent.

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In the language of Thordmark '272, these two locking mechanism are "two or more mutually independent lock functions." Col. 3, lines 8 and 9.

This language was previously presented within the one year period of time, and the language from claim 1 of Field '307 was removed because it is not believed to be technically accurate. Given the allowance of claims 1 and 14 of Field '307, over the same art now asserted by the Examiner, there is no basis for maintaining this rejection.

### **Claim 121**

Claim 121 defines a structure with “a bar interposed between said shell and said cylinder plug detent extending radially from a second recess within said shell into a passage within said cylinder plug to create an obstruction to rotation of said cylinder plug ...” in combination with a “cylinder plug comprising ... an electrical operator borne by said cylinder plug and rotatable with said cylinder plug, said electrical operator being electrically operable to respond to a control signal by moving independently of said detent between one of a first orientation accommodating relative movement between said detent and said cylinder plug and a second and different orientation maintaining obstruction of said relative movement by engaging said detent ... .” In addition to the deficiencies in the record noted in the foregoing several pages of this Brief, the Examiner’s proposed combination is wholly devoid of any structure able to implement Appellant’s “moving independently” without both preventing the primary reference from operating in its intended mode, and disregarding the specific structural teachings of the two secondary references. In other words, the record fails to show either a *prima facie* teaching or obviousness or motivation necessary to construct the Examiner’s proposed combination. The Examiner is therefore urged to refuse to sustain this rejection.

## IX. CONCLUSION

**First**, there is no evidence of record of an absence of either (i) a lack of enablement the subject matter of claim 90 or 120 of (ii) an absence of a written description the subject matter of claim 90 or 120, or (iii) a failure to disclose the best mode for practicing the subject matter of claim 90 or 120.<sup>79</sup> Under U.S. practice, “the examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant’s disclosure a description of the invention defined by the claims.”<sup>80</sup> That initial burden has not been met; consequently, in view of the satisfaction of the requirement for enablement of the phrases “distal member”, this rejection may not be sustained under the first paragraph of §112.<sup>81</sup>

**Second**, under *Geneva Pharmaceuticals., Inc. v. Glaxo SmithKline PLC*, 349 F.3d 1373, 68 USPQ2d 1865 (Fed.Cir. 21<sup>st</sup> November 2003), 35 U.S.C. §121 bars an obviousness-type double patenting rejection when (i) each claim of Appellant ‘601 patent appeared in the instant application, (ii) the Examiner actually imposed, maintained, and continues to maintain a requirement under 37 CFR §1.146 for an election of species, arguing that no generic claims were allowable, and (iii) Appellant’s filed a divisional application was filed to present claims which were indicated by the Examiner to be allowable in the above-captioned application, and those

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<sup>79</sup> *High Concrete Structures, Inc. v. New Enter. Stone And Lime Co.*, 377 F.3d 1379, 71 USPQ2d 1948, 1951, WL 1689152 (Fed. Cir. 29<sup>th</sup> July 2004).

<sup>80</sup> *MPEP*, 8<sup>th</sup> Ed., Rev. 3 (August 2005) §2163, citing *Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976).

<sup>81</sup> Where the meaning of a claim is “reasonably discernable,” the claim is not indefinite. *Bancorp Servs., LLC v Hartford Life Ins. Co.*, 359 F.3d 1367, 69 USPQ2d. 1996 (Fed. Cir. 1<sup>st</sup> March 2004).

claims were passed to issue in Appellant's '601 patent. This rejection of claims 1 through 5, 11 through 13, 34, 65 through 69, 75, 92 through 100, 112 and 121 may not therefore, be maintained under the doctrine of obviousness type double patenting.

**Third**, turning now to the issue of obviousness of claims 25, 26, 28, 30 through 33, 39 through 42, 46 through 52, 54, 56, 64, 70, 76, 77, 85, 90, 91, 105, 108, 109, 111, 113 through 116, 119, 120 and 121 under 35 U.S.C. §103(a) over the Examining staff's proposed combination of Gockebay '777, Thordmark '274 and Naveda '127, 35 U.S.C. §103 requires consideration of whether the differences between the subject matter defined by each pending claim and the prior art are such that the "subject matter as a whole" would have been obvious? Under U.S. practice, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1266, n.14, 23 USPQ2d 1780, 1783-84, n.14 (Fed Cir. 1992), citing *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). It is further established that the Examiner must make specific findings on a suggestion to combine prior art references. *In re Dembiczak*, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-19 (Fed. Cir. 1999).

As demonstrated the by foregoing paragraphs, the Examiner has focused not on the subject matter of Appellant's claims as a whole, but has focused upon individual limitations. Ostensibly, the prior art relied upon by the Examiner endeavors to provide a lock that may be easily retrofitted. Gokcebay '777 however, requires that a bore 50 be drilled within the shell of the existing lock while Thordmark '274 requires that a separate V-shaped groove 3c that is



spaced-apart and distinct from the slot for sidebar 7, be machined within the cylinder, and that the entire recess shown in Figure 1 be machined into the shell. Contrary to the Examiner's assertions, neither Naveda '127 nor Thordmark '274 nor Gockebay '777 advocates both insertion of an electrical operator into the cylinder plug and some interaction between that plug borne operator and a bar, elongated member or sidebar that is able to make simultaneous engagement of both the shell and cylinder plug, because:

- Gockebay '777 teaches only insertion of a solenoid within the cylinder,
- Gockebay '777 is wholly devoid of any bar (other than the armature 18 that is itself a part of solenoid 17),
- Gockebay '777 is wholly devoid of any bar that provides any type of engagement between the shell and cylinder,
- Thordmark '274 teaches nothing about insertion of any operator within the cylinder,
- both Gockebay '777 and Thordmark '274 require not only complete replacement of the cylinder, but major alteration of the shell in order to accommodate a retrofit,
- both Gockebay '777 and Thordmark '274 are utterly incapable of providing any interaction with their primary locking mechanical features, and
- Naveda '127 is singularly devoid of any teaching of a cylinder plug and discloses no primary mechanical locking mechanism as is required by both Gockebay '777 and Thordmark '274,
- Naveda '127 fails to describe how traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777.

Nowhere does the Examiner explain, and the art is silent, how the three parallel rotational members of Naveda '127, each of which requires a unique, spaced-apart axis of rotation, might be viewed to teach "miniaturization" of the single axis compact structures of the proposed combination. Of necessity, Naveda '127 teaches the antithesis of miniaturization asserted by the Examiner.

In contradistinction, Appellant's claims define a structure with an electrical operator borne by the cylinder plug, a member moving in response to the operator, and interaction between the operator and a bar, elongate member or sidebar interposed between the shell and the cylinder plug. Although these differences may appear to be but a small advance in the art, the advantages flowing from these differences are substantial. For example, only Appellant's claims define a structure with an electronic operator borne by the cylinder plug that interacts with a sidebar, elongate member or bar, and that consequently, is able to advantageously both retrofit an installed lock by the expedient of replacing only the cylinder plug *without any* alteration of the shell and to *interact or cooperate with* an existing sidebar of a primary mechanical locking mechanism that is positioned between the shell and plug. The fact that both Gockebay '777 and Thordmark '274 are concerned with retrofitting of existing locks, a fact noted by the Examiner, and that both references require modification of the shell of the lock in order to complete that retrofitting, while Appellant alone provides a cylinder plug that may work with an existing sidebar and may be retrofit without any modification of the shell is a difference between the prior art and the structure defined by the pending claims that prevents the subject matter as a whole from being obviousness under 35 U.S.C. §103. This deficiency in the Examiner's proposed

combination is not remedied by Naveda '127. Moreover, this deficiency is highlighted by the fact that Thordmark '274 clearly avoids either teaching or suggestion of any interaction or cooperation between sidebar 7 and coil 17.

This interaction with the existing sidebar beneficially enhances the security provided by Appellant's lock. Neither Gockebay '777, Thordmark '274 nor Naveda '127, nor the Examiner's proposed combination of Gockebay '777, Thordmark '274 and Naveda '127 are able to provide these advantages. Moreover, the Examiner's proposed combination is incomplete and fails to make a *prima facie* showing of obviousness; how, for example, is the traveling coil 17, armature 18 and latching element 10 of Fig. 7 of Thordmark '274 incorporated into the plug of Gockebay '777? No details of such a combination are provided by the Examiner's proposed combination. Accordingly, in view of these differences between the pending claims and the prior art, "the subject matter as a whole" can not be found to be rendered obvious under 35 U.S.C. §103. In short, the Examiner has unfairly sought to limit the scope of coverage to which Appellant is entitled by reconstructing the art in an effort to meet the terms of Appellant's claims when none of that art suggests such a simple modification of the art as Appellant's electrical operator being both borne by and rotating with the cylinder plug *and* operating to block the travel of a sidebar. Evidence of that error in the formation of the Examiner's proposed combination lies in the fact that the proposed combination is depends upon a primary reference that discloses numerous embodiments of an invention, but none of those several embodiments derive any advantage from the modifications required to construct the Examiner's proposed combination; those modifications simply produce a more cumbersome structure with more parts that

accomplishes nothing that the primary reference does not achieve without those modifications. This is evidence of a lack of motivation in the art to make the modifications necessary to construct the Examiner's proposed combination, as well as evidence that the Examiner is simply using Appellant's claims as a blueprint in an impermissible effort to make a hindsight reconstruction of the art.

Perhaps the proposed combination of Gokcebay 777, Thordmark, *et al.* '274 and Naveda '217 was formed on the reverse side of the "looking glass", out of sight of the intrinsic limitations of the proposed combination, guided only by Appellant's contribution to the art, and without consideration of the pending claims in their entireties:<sup>82</sup>

- By way of example, the Examiner's proposed combination including Gokcebay 777 is not a pioneering patent. Gokcebay '777 itself teaches, at some length, that it is an improvement over Appellant's earlier U.S. Patent No. 5,140,317.<sup>83</sup> Gokcebay '777 however, in seeking to improve upon Mr. Hyatt's, that is, the Appellant's, earlier efforts in the art, places a premium upon extreme compactedness<sup>84</sup> of his electronic access control that is physically irreconcilable with the demands of the secondary references for unrestricted axial length of its

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<sup>82</sup> 35 U.S.C. §103(a) mandates consideration of the *subject matter as a whole* in a determination of obviousness. A point-of-novelty test is improper.

<sup>83</sup> Gokcebay, *et al.*, '777, see the entirety of column 2, lines 7 through 54, devoted to an analysis by the Examiner's primary reference, of Appellant's earlier U.S. Patent No. 5,140,317.

<sup>84</sup> Gokcebay, *et al.*, '777, see column 3, lines 1 through 5, as well as column 4, lines 39 through 41.

“mutually independent lock functions.”<sup>85</sup> The primary reference, in his efforts to follow the teachings of Appellant, concentrates his structure within his cylinder plug 24 to offer a structure “in an extremely compact fashion”<sup>86</sup> for which “[n]o additional space is required to implement the system of the invention.”<sup>87</sup> The Examiner’s proposed combination however, as represented by Thordmark, *et al.* ‘274 and Naveda ‘217, dwells wholly outside the cylinder plug and demands,

“a latching element 10 [the configuration of which] can vary within wide limits ... [and] its length may vary but preferably it exceeds half the axial length of the plug and may – as in the illustrated embodiments — often substantially correspond to the axial length of the plug.”<sup>88</sup>

This disharmony, attributable to both the radial versus axial orientation in the primary and secondary references, as well as to the gross differences in size relative to the cylinder plug in the primary and secondary references, and to the insistence of the primary reference that “[n]othing is required outside the lock

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<sup>85</sup> Thordmark, *et al.* ‘274, column 2, lines 66 and 67, and column 3, line 9.

<sup>86</sup> Gokcebay, *et al.*, ‘777, see column 4, line 39.

<sup>87</sup> Gokcebay, *et al.*, ‘777, see column 4, lines 41, 42. As taught by the primary reference, his lock “has an electronic access feature which occupies no more space than the mechanical lock itself. **Nothing** is required outside the lock cylinder ... **aside from** a small recess or bore [*i.e.*, bore 50] which is provided in the cylinder shell.” Gokcebay, *et al.*, ‘777, see column 3, lines 1 through 5.

<sup>88</sup> Thordmark, *et al.* ‘274, see column 6, lines 18 through 25, together with column 4, lines 20 through 23.

cylinder”<sup>89</sup> versus the demand of the secondary references that all moving parts be required to be on the outside of the lock cylinder, is irreconcilable, and impermissibly prevents the primary reference from being practiced in its intended mode of operation, contrary to the practice under 35 U.S.C. §103(a). Consequently, the primary reference may not be modified according to the teachings of the secondary references.

- By way of a second example, Gokcebay ‘777 dwells upon direct engagement between the cylinder plug and its surrounding shell in an effort to provide, “in an extremely compact fashion, electronic access control to a conventional mechanical lock”<sup>90</sup> with “a bore or recess 50 [cut into cylinder shell 46] into which the blocking pin 38 extends in the blocking position.”<sup>91</sup> In the Examiner’s proposed combination including Thordmark, *et al.* ‘274, the entirety of “latching element 10” having a certain axial length, “coacts with a blocking element” 11 which is “conveniently moved axially by means of an electric motor, an electromagnet, a solenoid ...” is encased within “a lock cylinder 2”, to indirectly engage “plug 3”; this entirety is taught by the Examiner’s proposed combination to be one of two, or more, “**mutually independent** latching or blocking devices.”<sup>92</sup>

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<sup>89</sup> Gokcebay *et al.* ‘777, see column 3, lines 2 and 3.

<sup>90</sup> Gokcebay, *et al.*, ‘777, see column 4, lines 39 and 40.

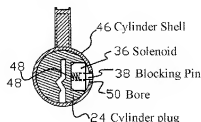
<sup>91</sup> Gokcebay, *et al.*, ‘777 see column 6, lines 45 through 48.

<sup>92</sup> Thordmark, *et al.* ‘274, column 2, lines 66 and 67, and column 3, lines 8 through 10.

This divergence by the secondary references from the teaching by the primary reference of a solenoid to achieve direct engagement between the cylinder plug 24 and bore 50 in the surrounding cylinder shell 46,

Gokcebay et al. U.S. Patent No. 5552777

Figure 5



in addition to irreconcilability between the teachings of the primary reference on “extremely compact fashion” and the demand by the secondary references in the proposed combination for a latching element 10 of a certain axial length, deprives the prior art of all evidence of motivation for making the Examiner’s proposed combination. The various teachings of the several component references in the Examiner’s proposed combination are irreconcilable on the features defined by the finally rejected claims.<sup>93</sup> Although the prior art may contain all of the constituent

<sup>93</sup>

**Claim 46:** “said cylinder plug comprising ... an electrical operator ... obstructing movement of said bar ...”

**Claim 56:** “an elongate member interposed between said shell and said plug to travel ... said plug comprising ... an electrical operator ... obstructing said travel ...”

**Claim 64:** “a sidebar interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ...”

**Claim 70:** “a bar interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ...”

**Claim 76:** “an elongate bar ... interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel...”

**Claim 77:** “an elongate bar ... interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ...”

**Claim 85:** “a side bar cooperating between the shell and the barrel ... at least one electromechanical locking member is disposed within the barrel ... an electronically



parts of the rejected claims, not only is that art devoid of motivation to combine those parts in the manner defined by these claims to cooperate in the relationships set forth by these claims, but the teachings of that art are irreconcilable on the precise points of mutual independence of lock functions, compactedness and direct, versus indirect, engagement between the lock cylinder 2 and plug 3, where that art differs between the pending claims. In view of such advantageous results flowing from these differences such as Appellant's preservation of compactedness and enabling retro-fitting without a need to cut a bore 50<sup>94</sup> into the shell in the manner required by the primary reference, these rejections may not be sustained under 35 U.S.C. §103(a).

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powered drive mechanism located within the barrel and cooperating with the electromechanical locking member to selectively move the locking member ... in which the side bar moves ... .”

**Claim 89:** “an elongate ... barrel member ... containing an electromechanical locking member ... disposed in the recess of the barrel member ... an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking member ... .”

**Claim 90:** “providing an electronically powered rotatable barrel ... including: at least one electromechanical locking member disposed in the barrel ... positionable to permit the side bar to engage the locking member ... .”

**Claim 91:** “a bar interposed between said shell and said cylinder plug to reciprocate ... a locking mechanism borne by said cylinder plug ... hindering said reciprocation ... and an electrical operator borne by said cylinder plug ... providing obstruction of said reciprocation by said bar ... .”

**Claim 120:** “an elongated ... barrel member ... containing a plurality of electromechanical locking members ..., each of the locking members including a groove ... [and] an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking members to a position in which the grooves of the locking members are aligned.”

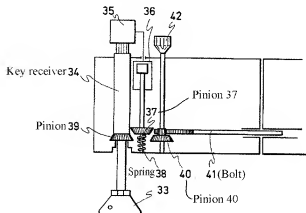
**Claim 121:** “a bar interposed between said shell and said cylinder plug detent extending radially from a second recess within said shell ...; said cylinder plug comprising ... and electrical operator borne by said cylinder plug ... moving ... between ... a second and different orientation maintaining obstruction of said relative movement by engaging said detent ... .”

<sup>94</sup>

Gokcebay, *et al.*, ‘777 see column 6, lines 45 through 48.

- By way of further example, the Examining Staff makes much of the teaching in the Examiner's proposed combination including Naveda '127 in the proposed combination,

**Naveda U.S. Patent No. 4416127  
Figure 10**



despite the fact that all, and every single one of the moving parts of Naveda '127, namely pinion 39, pinion 37, spring 38, pinion 40, bolt 41, and the various unnumbered shafts, are all located wholly outside the circumference of key receiver 34,<sup>95</sup> unlike the structure defined by the pending claims.<sup>96</sup> At issue before

<sup>95</sup> See Figure 10, of Naveda '127.

<sup>96</sup> **Claim 46:** "a bar borne by said plug ... said cylinder plug comprising: ... an electrical operator..."

**Claim 56:** "an elongate member interposed between said shell and said plug to travel ... said plug comprising ... an electrical operator ..."

**Claim 64:** "a sidebar interposed between said shell and said cylinder plug to travel ...; and an electrical operator borne by said cylinder plug ..."

**Claim 70:** "a bar interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ..."

**Claim 76:** "an elongate bar ... interposed between said shell and said cylinder plug to

the Examiner is what evidence of record provides motivation for incorporating the moving parts found on the exteriors of the structures in the secondary references into the interior of the cylinder plug? The primary reference itself, which limits “an electronic access feature ... [to occupancy of] no more space than the mechanical lock itself,”<sup>97</sup> may not be read to provide that motivation.

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travel ... an electrical operator borne by said cylinder plug ... .”

**Claim 77:** “an elongate bar ... interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ... .”

**Claim 85:** “a side bar cooperating between the shell and the barrel ... at least one electromechanical locking member is disposed within the barrel ... an electronically powered drive mechanism located within the barrel and cooperating with the electromechanical locking member to selectively move the locking member ... in which the side bar moves ... .”

**Claim 89:** “an elongate ... barrel member ... containing an electromechanical locking member ... disposed in the recess of the barrel member ... an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking member ... .”

**Claim 90:** “providing an electronically powered rotatable barrel ... including: at least one electromechanical locking member disposed in the barrel ... positionable to permit the side bar to engage the locking member ... .”

**Claim 91:** “a bar interposed between said shell and said cylinder plug to reciprocate ... a locking mechanism borne by said cylinder plug ... hindering said reciprocation ... and an electrical operator borne by said cylinder plug ... providing obstruction of said reciprocation by said bar ... .”

**Claim 120:** “an elongated ... barrel member ... containing a plurality of electromechanical locking members ..., each of the locking members including a groove ... [and] an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking members to a position in which the grooves of the locking members are aligned.”

**Claim 121:** “a bar interposed between said shell and said cylinder plug detent extending radially from a second recess within said shell ...; said cylinder plug comprising ... and electrical operator borne by said cylinder plug ... moving ... between ... a second and different orientation maintaining obstruction of said relative movement by engaging said detent ... .”

<sup>97</sup>

Gokcebay, *et al.*, ‘777 see column 3, lines 1 through 6, together with column 2, lines 53 and 54, column 4, lines 40 through 43, and column 10, lines 10 through 15.

Turning now to consideration of exemplars of deficiencies of the evidence in the administrative record before the Examiner which were noted earlier in the paper, these deficiencies in the evidence must be considered under the criterion set forth by the Court in *In re Sang-Su Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002):<sup>98</sup>

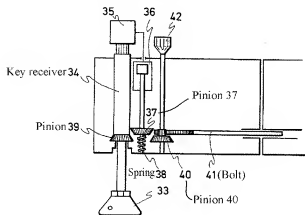
- By way of an additional example, the Examining Staff has sought to find motivation to incorporate the Thordmark, *et al.* '274 and Naveda '217 references into the structure of Gokcebay '777, despite the fact that Gokcebay '777, in teaching his improvements over Appellant's '317 patent, twice teaches against a structure such as that of Naveda '217 where the lock's system "would take up space within the ... lock casing adjacent to the lock."<sup>99</sup> Despite this caution by the primary reference against structures such as that taught by Naveda '217, and despite the fact that all of the movable parts of Naveda '217 are in fact, located entirely within the lock's casing,

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<sup>98</sup> "Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the teaching or suggestion to combine prior art references. ... The need for specificity pervades this authority." *In re Sang-Su Lee*, 61 U.S.P.Q.2d @1433 (Fed. Cir. 2002).

<sup>99</sup> See Gokcebay, *et al.*, '777, at col. 2, lines 39-40 ("the system of the patent [referring to Appellant's earlier '317 patent] requires additional hardware within the lock casing ...") and col. 2, lines 52-54 ("which avoids the need for electronics, solenoids or other hardware which would take up space within the ... lock casing adjacent to the lock").

Naveda U.S. Patent No. 4416127  
Figure 10



the Examining Staff seems convinced that Naveda '217 teaches the proposition that movable parts such as that taught by Thordmark, *et al.* '274 which are **also wholly external** to the cylinder plug, should be incorporated into the cylinder plug in the manner taught by Appellant's claims 120 and 121.<sup>100</sup> The fact that the sole motivation for such a construction is found in Appellant's claims, is convincing indicia of obviousness *vel non*.

- By way of a second additional example, the Examining Staff has ignored the complete absence from the art of any motivation provided by either Thordmark, *et al.* '274 or Naveda '217, or by Thordmark, *et al.* '274 and Naveda '217 in

<sup>100</sup>

**Claim 56:** "an electrical operator ... obstructing said travel and relative operable movement between said shell and said plug *while* said electrical operator is *contained wholly within said plug* ... ." In contradistinction the armature (*i.e.*, "block pin 38") of the primary reference would lack utility if its electrical operator was *wholly within said plug* during its locking situation, because the distal end of that electrical operator must extend completely through and beyond the cylinder plug and into bore 50 within the shell. See Gokcebay, *et al.*, '777, at column 6, lines 45 and 46.

combination, to incorporate into the cylinder plug of the Examiner's proposed combination any constituent component other than the solenoid taught by the primary reference, and therefore lacks appellant's cooperation between an electrical operator borne by the cylinder plug and cooperating with a bar.

- By way of a third further example, the Examiner's proposed combination including Gokcebay '777 teaches that the embodiment illustrated in Figures 3, 4 and 5 "allows for secondary locking 'high security' mechanical features,"<sup>101</sup> but is utterly devoid of any teaching or suggestion for structural or functional cooperation between these "secondary locking 'high security' mechanical features" and his "conventional lock cylinder 20", while Thordmark, *et al.* '274 teaches "locks which include two or more *mutually independent* latching or blocking devices, of which one can be activated electrically"<sup>102</sup> and "a lock of the kind ... which has two or more *mutually independent* lock functions",<sup>103</sup> and Nevada '127 teaches but a single magnetic lock. Only Appellant's claims 46, 56 and 64, which when integrated into a conventional locking mechanism, advantageously both (i) recognize the innate deficiencies in locking structure devoted to preserving the mutually independency (as well as the secondariness of

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<sup>101</sup> Gokcebay, *et al.*, '777, column 6, lines 54 and 55.

<sup>102</sup> Thordmark, *et al.* '274, column 2, line 66 through column 3, line 1.

<sup>103</sup> Thordmark, *et al.* '274, column 3, line 9.

Gokcebay '777's "secondary locking"<sup>104</sup> of the lock functions in the prior art and (ii) provide "latching or blocking devices, of which one can be activated electrically"<sup>105</sup> and, unlike the prior art, may be integrated to cooperate in reinforcing the locking function of both locking mechanisms,<sup>106</sup> or alternatively, be selectively controlled to allow the mutual independency of the prior art.

- By way of a fourth example, the embodiment of Figures 3, 4 and 5 of the primary reference in the proposed combination teaches "a bore or recess 50 into which the blocking pin 38 extends in the blocking position."<sup>107</sup> Incorporation of any component of the secondary references into the primary reference impermissibly destroys the ability of the primary reference to operate in its intended mode of operation with "bore or recess 50 into which the blocking pin 38 extends,"<sup>108</sup> because such an incorporation would inherently block bore 50. This inconsistency

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<sup>104</sup> Gokcebay, *et al.*, '777, column 6, line 54.

<sup>105</sup> Thordmark, *et al.* '274, column 2, line 66 through column 3, line 1.

<sup>106</sup> It is not customary in U.S. practice to define the advantages that result from a novel structure, such as those advantages provided by a structure such as Appellant's that flow from positioning an electrical operator to interact with a bar, detent or sidebar; the language of **Claim 64** expressly encompass such a structure and is worded to read: "said sidebar having a first portion that is positioned to be optionally block by another component of said lock functioning independently of said electrical operator to prevent said travel by said sidebar, and a second portion that is positioned to be blocked from said travel by said sidebar to said second position whenever said electrical operator is within said first orientation ... ."

<sup>107</sup> Gokcebay, *et al.*, '777, column 6, lines 44 and 46.

<sup>108</sup> Gokcebay, *et al.*, '777, column 6, lines 44 and 46.

is further evidence of non-obviousness.

- By way of a fifth example, incorporation of any component of the secondary references into the embodiment of Figures 3, 4 and 5 of the primary reference in the proposed combination which teaches “a bore or recess 50 into which the blocking pin 38 extends in the blocking position”<sup>109</sup> is a distortion of the teachings of the primary references because Thordmark, *et al.* ‘274 already teaches “a lock cylinder 2 which accommodates a plug 3 ... [and] a side-bar 7 [which] is able to move radially inward in the plug, so as to enable the plug to be rotated”<sup>110</sup>, and preserves that “side bar 7” entirely **mutually independent**<sup>111</sup> from the operation of “latching element 10”, “blocking element 11”, “electric motor 12” and “electromagnet 17”, unlike the structure defined by the pending claims.<sup>112</sup>

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<sup>109</sup> Gokcebay, *et al.*, ‘777, column 6, lines 44 and 46.

<sup>110</sup> Thordmark, *et al.* ‘274, column 4, lines 57-66.

<sup>111</sup> Thordmark, *et al.* ‘274, column 2, line 67, and column 3, line 9.

<sup>112</sup> **Claim 46:** “said cylinder plug comprising ... an electrical operator ... obstructing movement of said bar ...”

**Claim 56:** “an elongate member interposed between said shell and said plug to travel ... said plug comprising ... an electrical operator ... obstructing said travel ...”

**Claim 64:** “a sidebar interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ...”

**Claim 70:** “a bar interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ...”

**Claim 76:** “an elongate bar ... interposed between said shell and said cylinder plug to travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel...”

**Claim 77:** “an elongate bar ... interposed between said shell and said cylinder plug to



- By way of a sixth example, the Examiner's proposed combination relies entirely upon electrically energy to move external blocking pin 38 of Gokcebay, *et al.*, '777, to move external blocking element 11 of Thordmark, *et al.*, '274 and to move external pinion 37 of Naveda '127. In contradistinction, Appellant relies is able to use the "torque that is externally applied to said plug and causes rotation of said plug within said shell."<sup>113</sup> There is no evidence of motivation present in

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travel ... an electrical operator borne by said cylinder plug ... providing obstruction of said travel ... ."

**Claim 85:** "a side bar cooperating between the shell and the barrel ... at least one electromechanical locking member is disposed within the barrel ... an electronically powered drive mechanism located within the barrel and cooperating with the electromechanical locking member to selectively move the locking member ... in which the side bar moves ... ."

**Claim 89:** "an elongate ... barrel member ... containing an electromechanical locking member ... disposed in the recess of the barrel member ... an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking member ... ."

**Claim 90:** "providing an electronically powered rotatable barrel ... including: at least one electromechanical locking member disposed in the barrel ... positionable to permit the side bar to engage the locking member ... ."

**Claim 91:** "a bar interposed between said shell and said cylinder plug to reciprocate ... a locking mechanism borne by said cylinder plug ... hindering said reciprocation ... and an electrical operator borne by said cylinder plug ... providing obstruction of said reciprocation by said bar ... ."

**Claim 120:** "an elongated ... barrel member ... containing a plurality of electromechanical locking members ..., each of the locking members including a groove ... [and] an electronically powered drive mechanism located within the barrel member for moving the electromechanical locking members to a position in which the grooves of the locking members are aligned."

**Claim 121:** "a bar interposed between said shell and said cylinder plug detent extending radially from a second recess within said shell ...; said cylinder plug comprising ... and electrical operator borne by said cylinder plug ... moving ... between ... a second and different orientation maintaining obstruction of said relative movement by engaging said detent ... ."

<sup>113</sup>

**Claim 56**, lines 6-9.

the record before the Examiner to modify the primary reference to rely upon externally applied torque to remove "blocking pin 38" from bore 50.

Consequently, there is no basis in the record for sustaining the final rejection of claims 46, 56, 64, 70, 76, 77, 90, 91, 120 or 121.

Moreover, an improvement made in such a very crowded and ancient art is further evidence of non-obviousness. Reversal of this rejection and allowance of claims 46 through 52, 54, 56, 64, 70, 76, 77, 85, 90, 91, 105, 108, 109, 111, 113 through 116, 119, 120 and 121 is respectfully urged.

Such action is respectfully requested.

#### **Allowable Subject Matter**

Claims 27, 29, 78-81 are objected to as being dependent upon a rejected base claim, but the Examiner stated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No fee is incurred by this Response. Should other fees be incurred however, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

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